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ENVIRONMENTAL SITE ASSESSMENT: TOWNSHIP AND RLZ AREA, CLARKEFIELD, VIC

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Acronyms & Units

ABC	Ambient Background Concentration
ACL	Added Contaminant Limits
ACM	Asbestos Containing Materials
ADWG	Australian Drinking Water Guidelines
agl	Above Ground Level
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment Conservation Council
ARMC ANZ	Agriculture and Resource Management Council of Australia and New Zealand
AS	Australian Standard
ASLP	Australian Standard Leaching Procedure
ASS	Acid Sulphate Soil
AST	Aboveground Storage Tank
B(a)P	Benzo(a)Pyrene
bgl	Below ground level
BH	Borehole
BPEM	Best Practice Environmental Management Siting, Design, Operation and Rehabilitation of Landfills
BTEX	Benzene, toluene, ethylbenzene, xylenes
BTEXN	Benzene, toluene, ethylbenzene, xylenes, naphthalene
btoc	Below top of casing
CCME	Canadian Council of Ministers for the Environment
CEC	Cation Exchange Capacity
CHC	Chlorinated Hydrocarbons
COC	Chain of Custody
COPC	Contaminant of Potential Concern
meq	Milliequivalents
mg	Milligram
mg/kg	Milligram per Kilogram
mg/L	Milligram per Litre
mg/m^3	Milligram per cubic meter
MGA	Map Grid of Australia
mm	Millimetre
MMBW	Melbourne Metropolitan Board of Works
MW	Monitoring well
N	Nitrogen
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NATA	National Association of Testing Authorities
ND	Non-Detectable
NDD	Non-Destructive Digging
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
OCP	Organochlorine Pesticides
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbon
PAN	Pollution Abatement Notice
PASS	Potential Acid Sulphate Soil
PCB	Polychlorinated Biphenyls

CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
CUN	Clean up Notice
CUTEP	Clean Up to The Extent Practicable
DELWP	Department of Environment, Land, Water and Planning
DNAPL	Dense Non-Aqueous Phase Liquid
DO	Dissolved Oxygen
DQO	Data Quality Objectives
DSE	Department of Sustainability and Environment
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EIL	Ecological Investigation Level
EMP	Environmental Management Plan
EPA	Environment Protection Authority
ESA	Environmental Site Assessment
ESL	Ecological Screening Level
GIL	Groundwater Investigation Levels
GME	Groundwater Monitoring Event
GQRUZ	Groundwater Quality Restricted Use Zone
GSV	Gas Screening Value
GW	Groundwater
Ha	Hectares
HHRA	Human Health Risk Assessment
HIL	Health Investigation Level
HSL	Health Screening Level
IWRG	Industrial Waste Resource Guidelines
kg	Kilogram
km	Kilometre
L	Litre
LFG	Landfill Gas
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of Reporting
m	Metre
MAH	Monocyclic Aromatic Hydrocarbons
mbgl	Metres Below Ground Level
PCE	Tetrachloroethylene
PCPAN	Post Closure Pollution Abatement Notice
PESA	Preliminary Environmental Site Assessment
pH	Potential Hydrogen
PID	Photo-ionisation Detector
PIW	Prescribed Industrial Waste
ppm	Parts per million
PSI	Preliminary Site Investigation
PSR	Priority Sites Register
QA/QC	Quality Assurance / Quality Control
RL	Reduced Level
RPD	Relative Percentage Difference
SAQP	Sampling, Analysis & Quality Plan
SCMP	Site Contamination Management Plan
SEPP	State Environment Protection Policy.
SRW	Southern Rural Water
SVOC	Semi-Volatile Organic Compounds
SWL	Static Water Level
TCE	Trichloroethylene
TDS	Total Dissolved Solids
TEQ	Toxic Equivalence Quotient
TIT	Triple Intercept Trap
TOC	Top of Casing
TP	Test Pit
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
$\mu g/m^3$	Micrograms per cubic meter
UPSS	Underground Petroleum Storage Systems
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
Vic	Victoria
VOC	Volatile Organic Compound
VVG	Visualising Victoria's Groundwater
WHO	World Health Organisation

EXECUTIVE SUMMARY

The objective of this detailed environmental site assessment (ESA) was to assess the actual level and nature of contamination (if any) at the site in order to ascertain if the land is suitable for the proposed development uses. The ESA builds on an earlier preliminary site investigation (PSI) that included an environmental and historical records review with a detailed environmental site inspection. The PSI confirmed an overall low potential for site contamination. The site was therefore not defined as 'potentially contaminated' in accordance with Ministerial Direction No. 1 and an environmental audit is not considered requisite.

Detailed environmental site investigation was, however, recommended in order to confirm the contamination status of the land with respect to potential future sensitive land uses. A further review confirmed that there were no additional sources, or land uses posing a potential for site contamination that were not already identified by the PSI.

For the assessment of site contamination NEPM ecological and human health-based investigation/screening levels relevant to urban residential/public open spaces (for ecological) and 'A' Setting or standard residential exposures (for health) and were adopted.

Soil sampling by a variety of methods at 50 locales was programmed to provide a systematic and detailed appraisal of potential site investigation. This included targeted and grid-based sampling over a historical house area, an area of recent filling, four infilled dam areas, a large pile of imported soil/rock (some hard wastes) and an existing house area in the south.

The field investigation found trace tile and brick fragments near a former house, an absence of buried wastes within former dams, imported filling at some locations around the southern house area but no intermixed wastes, odours or asbestos-containing material including within three exploratory test pits near the dam. A long soil pile was observed to contain limited quantities of bricks and concrete which can be readily separated. No other evidence of suspected land contamination (e.g. staining, odours, stressed vegetation etc.) was identified.

All samples analysed for organic chemical contaminants were non-detectable. Testing of 75 samples for metals identified only zinc as being marginally above the adopted site assessment criteria (ecological) in two samples. All soil sample results (targeted and grid-based) were reported below adopted human health investigation and screening levels (HILs/HSLs). Based on the sampling program results, further soil investigation with respect to potentially negative ecological or human health effects is not required. The site is also considered to meet buildings & structures and aesthetic criteria for future sensitive land uses.

Irrespective that the current investigation did not observe visible asbestos in an area where it had previously been reported, potential human health risks arising from the earlier PSI observations were resolved by the subsequent completion of an asbestos removal and clearance program over the affected area. Following the removal of vegetation, soil raking and picking by a licensed

asbestos removalist, a clearance certificate was provided for the east side of the dam area where asbestos was previously noted.

The environmental site assessment has not identified any locations where further contamination investigation, management, or remediation is considered necessary to protect values pertinent for the proposed future sensitive and other land uses.

Any soils which are imported or removed to the site (and any wastes generated during site development) should be managed in accordance with EPA Victoria Industrial Waste Resource Guidelines.

1 INTRODUCTION

To inform master planning decisions with respect to proposed development of the subject land, an environmental site assessment was completed to characterise the land for contamination with respect to *sensitive* and other type land uses.

Atma Environmental previously provided a preliminary environmental site investigation (PSI) of the subject land, together with additional land located further north of the Township zone (Atma Environmental, 07 Aug 2019, ref. 1788). The present site sampling assessment was focused on the land zoned as Township directly north and south of Station St, Clarkefield; and on a portion zoned Rural Living further south.

The earlier PSI included an environmental and historical records review and a detailed environmental site inspection. Ministerial Direction No.1 'Potentially Contaminated Land' (1989) defines "potentially contaminated land" as land used, or known to have been used for industry, mining, or the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of the land). The PSI confirmed that the principal past and current land use has been farming, township and rural residential, posing an overall low potential for site contamination. The site was therefore not defined as 'potentially contaminated' in accordance with this Direction. Within the context of Ministerial Direction No. 1 and the known site history, an environmental audit was not considered requisite.

A more detailed environmental site assessment with soil sampling targeting areas of potential environmental concern was recommended by the PSI, as documented in this report. Environmental site assessment (fifty sampling locations) has included both detailed soil sampling in areas of potential environmental interest and targeted sampling in other areas to ascertain if any levels of unacceptable contamination exist.

Due to thick overgrowth the detailed site assessment was unable to confirm the presence of bonded asbestos scatter near the large dam on the south part of the Site, as noted in the PSI report. Such asbestos potentially restricting the proposed future land, an additional clean-up exercise was completed to remove vegetation and clear the area for asbestos (documentation appended).

2 OBJECTIVES AND SCOPE OF ASSESSMENT

2.1 Objectives

The objective of this investigation was to assess the actual level and nature of contamination (if any) at the site, whether the land is suitable for the proposed mixed uses, with the most sensitive use being low-density residential subdivision, and to ascertain what (if any) contamination/management /remediation measures may be required prior to residential use and to confirm whether or not an environmental audit of all, or part, of the land is required.

2.2 Scope of the Environmental Site Assessment

To meet the project objectives, the following scope of work was completed:

- Review of previous PSI report;
- Review of more recent online site imagery to note any changed site conditions or areas of imported filling, potential site contamination and advise;
- Environmental site inspection by environmental scientist to note the current site conditions, compare to previous and to identify any new areas of potential environmental concern requiring further investigation;
- Prepare photo documentation and site inspection findings;
- Set out of GPS-controlled systematic site sampling grid, targeted locations and stockpile sampling (50 locations),
- Prepare SWMS for proposed field works;
- Complete field works to obtain soil samples at areas of potential concern near: the former homestead (five locations); targeting filled former dams (four locations); a filled area of site (10 systematic grid locations); the southern dam/homestead/dairy area (21 systematic grid locations); and from previously stockpiled material (ten samples).
- Development of relevant site investigation screening levels for contaminants of concern;
- Laboratory analysis using NATA accredited methods of soil samples (inclusive of QA/QC samples) for a range of the main contaminants of potential concern.
- Assessment of field observations and lab analysis results against residential screening levels and provision of advice in relation to soil disposal, the further investigation and/or remedial actions needed.

3 SITE IDENTIFICATION AND DESCRIPTION

The 'Site' is situated approximately 40 km north-west of Melbourne's central business district (refer to Figure 1) and falls in the Macedon Ranges Shire council area. The site investigated is made up of five land parcels comprising approximately 32.8 ha in total.

Table A. Site Identification

Parcel	Lot/Plan	Description (Addressed as):	Size
1	Lot 1 TP330358	The eastern part of land north of Station St, zoned Township (1558 Melbourne-Lancefield Rd)	8.8 ha
2	Lot 2 LP 219482	The western part of land north of Station St, zoned Township (Station St, Clarkefield)	4.7 ha
3	Lot 1 PS 442971	The western part of land south of Station St, zoned Township (1227 Melbourne-Lancefield Rd, Clarkefield)	4.5 ha
4	Lot 2 PS 442971	The eastern part of land south of Station St, zoned Township (1227 Melbourne-Lancefield Rd, Clarkefield)	4.5 ha
5	Lot 1 TP914006	The southernmost triangular part, zoned Rural Living (1227 Melbourne-Lancefield Rd, Clarkefield)	10.3 ha

Figure 2 provides an overall site plan showing the extent of the five parcels. Environmental Audit

Overlays do **not** affect any of the properties. One Heritage Overlay is applied to a neighbouring property at 50 Station St, Clarkefield. Planning Property Reports (showing the site and surrounding land use zoning) were provided as part of the PSI (Appendix A).

4 PREVIOUS REPORT

4.1 Preliminary Site Investigation

Atma Environmental completed a previous preliminary site investigation report covering the subject Site (7 August 2019, ref. 1788), reproduced here as Appendix A.

The PSI report included a historical-environmental desktop review and an environmental site inspection. The desktop review confirmed that the site had historically been used as agricultural land. Aerial photos suggested the presence of a former *historical* dwelling north of Station St and occupation of the *existing house* in the area zoned RLZ south of Station St, since the early 1970s. This also confirmed that that the Township portion of the land south of Station St was filled in approximately 2013.

A site inspection found soil and rock stockpiles in the vicinity of the various agriculture sheds. Land use around the existing house appeared to have included animal keeping, with numerous buildings removed over time. A row of soil stockpiles (pre-dating 2010) was identified north of the house. Areas near the house were observed to have been filled in the past.

Areas of site fill were identified north, west and south of the house, as well as some backfilled dams (four in total). Also identified was the elongate rock-soil stockpile in the south-central area. No odours or staining were noted across the site, however, near the southern dam, asbestos was identified in the surface of the soil.

Atma Environmental concluded that the area north of Station St presented a low contamination potential. However, the area south of Station Street required further assessment consisting of a more detailed environmental assessment with soil sampling to target the areas that were backfilled, historical and existing houses, removed structures, stockpiled material and asbestos-impacted area to confirm the low potential for site contamination and to inform the planned future residential development works.

4.2 Changes to Site Condition/Uses

A review of most recent aerial photography was completed. That review, and our field observations confirmed that the site condition had not changed since completion of the PSI report and there were no additional sources, or land uses posing a potential for site contamination not already identified.

5 SOIL INVESTIGATION

5.1 Beneficial Uses of Land

The State Environment Protection Policy (*Prevention and Management of Contamination of Land*) (Land SEPP) outlines Land Use Categories and specifies Beneficial Uses which must be protected for each of these categories. Table C summarises the relevant beneficial uses that must be protected for sensitive and other land uses.

Table C. Protected Beneficial Uses of Land

Beneficial Uses to Be Protected:	Potential Site Land Use:						
	Parks & Reserves	Agri-culture	Sensitive Use: High Density	Sensitive Use: Other	Recreation Open Space	Comm-ercial	Indus-trial
Maintenance of Ecosystems:							
Natural Ecosystems >	✓						
Modified Ecosystems >	✓	✓		✓	✓		
Highly Modified Ecosystems >		✓	✓	✓	✓	✓	✓
Human Health:	✓	✓	✓	✓	✓	✓	✓
Buildings & Structures:	✓	✓	✓	✓		✓	✓
Aesthetics:	✓		✓	✓	✓	✓	
Production of food, flora & fibre:	✓	✓		✓			

Review of a draft conceptual site development plan anticipates a variety of future land uses including assorted sensitive uses, mixed use, educational and recreational use, with the portion of the land furthest south set aside for drainage purposes.

5.2 Assessment Guidelines

The following sections outline the assessment guidelines used to assess the sites condition against the beneficial uses of land.

Maintenance of Ecosystems

For the protection of ecology, contaminant concentrations in soil are compared to the Ecological Investigation and Screening Levels found in the National Environment Protection Council *"National Environment Protection (Assessment of Site Contamination) Measure 1999*, *Amendment Measure 2013 (No. 1)"* (NEPM) including the errata update of 30 April 2014.

Ecological Investigation Levels (EILs):

Ecological Investigation Levels (EILs) have been developed for selected metals and organic substances and are applicable for assessing risk to terrestrial ecosystems. EILs depend on specific

soil physicochemical properties and land use scenarios, and generally apply to the top 2 m of soil. The derivation of site-specific EILs was completed for chromium (III), copper, nickel and zinc, using the average recorded CEC (9.8 meg/100g) and average recorded pH (4.82 units) and as a conservative screening method, a clay content of 1% is used.

The EILs used are those based on aged contaminant values, relevant for contamination which has been present in soil for at least two years. Clay content was not laboratory measured, therefore as a conservative screening method a clay content of 1% is used in the calculations. This likely underestimate actual clay content conditions at this site. Background contaminant concentrations are not available for the site and thus a typical background concentration for low traffic areas in Victoria was adopted.

Ecological Screening Levels (ESLs):

The NEPM also provides Ecological Screening Levels (ESLs) which have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon (TPH) fractions and which are applicable for assessing risk to terrestrial ecosystems. ESLs broadly apply to coarse and fine-grained soils and to various land uses and they are generally applicable to the top 2 m of soil. As a conservative screening method, the most sensitive (lowest) ESLs have been adopted (i.e. those for coarse-grained soils with the exception of xylene, for which the ESL is more sensitive for fine-grained soils).

Land Use Scenarios:

EILs and ESLs have been developed for three generic land use settings:

- Areas of Ecological Significance
- Urban Residential/Public Open Spaces, and
- Commercial and Industrial land uses

An area of ecological significance is one where the planning provisions or land use designation is for the primary intention of conserving and protecting the natural environment (e.g. national parks, state parks, wilderness areas and designated conservation areas). This land use setting is not relevant for the site and is not considered further.

In terms of the proposed development, the most sensitive setting of Urban Residential/Public Open Space land use (providing protection for 80% of species) is considered the most applicable for the future residential development. Where soils meet these adopted criteria, the soil quality may also be considered as being adequately protective of other less sensitive land use settings (such as mixed use or commercial/industrial uses). Relevant ecological assessment criteria as adopted are listed on the analytical summary table (Table 1).

Human Health

Soil sample results are compared to Health-based Investigation and Screening Levels found in the NEPM including the errata update of 30 April 2014.

Health Investigation Levels (HILs):

Health-based Investigation Levels (HILs) have been developed for a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure. The HILs are generic to all soil types but vary for different land use scenarios.

Health Screening Levels (HSLs):

Health Screening Levels (HSLs) for selected petroleum compounds and fractions are applicable for assessing human health risk by the inhalation pathway. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. They apply to different soil types, and depths below surface to greater than 4 m. As a conservative screening method, the results are compared against the HSLs for *sandy soils at <1 m* depth.

The NEPM does not provide guidelines for assessment of human health risk from petroleum compounds and fractions by the direct contact pathway; therefore, soil HSLs for direct contact found in the CRC CARE Technical Report No. 10 (*'Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater'* Friebel & Nadebaum, 2011) are used.

The NEPM also provides guidance for the assessment of asbestos in soils, which requires no visible asbestos to be present in the near surface soils (i.e. top 0.1 m depth), with qualitative HSLs available for the assessment of visible asbestos (where present) and non-visible asbestos (where suspected) in deeper soils.

Land Use Scenarios:

There are four predominant exposure settings that are used when assessing the use or proposed use of a site:

- 'A' - for standard residential with garden/accessible soil including childcare centres, preschools and primary schools;
- 'B' - for high-density residential with minimal garden/accessible soil such as high-rise buildings and apartments;
- 'C' - for parks, recreational open space and playing fields, also includes secondary schools and footpaths; and
- 'D' - for commercial/industrial use including shops, offices, factories and industrial sites

In terms of health-based criteria, the **'A' HILs** are considered most relevant for the future site development. Where soils meet these adopted criteria, the soil quality may also be considered as being adequately protective of other less sensitive land use settings (such as mixed use or commercial/industrial uses). Relevant health-based assessment criteria as adopted are listed on the analytical summary table (Table 1).

Buildings and Structures

The beneficial use may be assessed by a review of physical parameters such as pH, sulphate, redox potential, salinity, or any chemical substance or waste that may have a detrimental effect on structural integrity of buildings or any other structures.

The site is not located on an area of probable acid sulphate soil, though further investigation may be required where pH is less than 4.0 (per Victoria EPA Publication 655) and where sulphate exceeds 2,000 mg/kg (NEPM 1999 EIL), or where EC is considered indicative of potentially aggressive soils.

The Australian Standard AS2159-2009 *Piling – Design and Installation,* provides data on the severity of soil sulphate and pH on concrete structures, with a pH >5.5 being considered non-aggressive to all soils above the groundwater.

Aesthetics

In general, the criteria for aesthetics relate to the presence of low-concern or non-hazardous inert foreign material (refuse) in soil or fill resulting from human activity. This may include general wastes, industrial, construction and demolition wastes, soil discoloration, or residual odours.

With reference to Schedule B1, Section 3.6 of the NEPM, circumstances which would trigger a further assessment of aesthetics include: highly malodorous soils or extracted groundwater, hydrocarbon sheen on surface water, significant soil staining (associated with otherwise inert chemical waste), monolithic deposits of low-risk materials, putrescible refuse (potentially generating hazardous levels of methane), and animal burials.

Numerical criteria are not available for assessing aesthetics and its assessment requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use.

Production of Food, Flora or Fibre

This Beneficial Use is assessed with reference to the same criteria as per Maintenance of Ecosystems. Maintenance of Ecosystems criteria are considered applicable, as the guideline values are set to be protective of plant (among other) species. However, it is recognised that these criteria may not necessarily be applicable for some contaminants (such as organochlorine pesticides, or OCPs).

Alternative criteria may be adopted for the assessment of OCPs in relation to the Beneficial Use *Production of Food, Flora & Fibre,* where OCPs are detected above laboratory limit of reporting at the site.

5.3 Soil Investigation Methodology & Rationale

Atma Environmental's documented standard operating procedures for soil sampling, quality assurance and equipment decontamination are comparable with those found in Australian Standard AS4482.1 – 2005, (*Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds*) and AS4482.2-1999 (*Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances*) and were adhered to during the site investigation.

Owing to the low potential for general site contamination (away from those localised areas assessed as posing a medium potential for contamination), the overall number of site sampling locations was less than the minimum number of sampling locations recommended for hotspot detection as provided by AS4482.1-2005.

To assess the site a stratified sampling program was adopted that included 50 sampling locales:

- Targeted test pit sampling to investigate for possible contamination at former dams (now filled) – four locations;
- Regular grid sampling at a statistically relevant number of locations in a large area previously filled – 10 locations;
- Detailed sampling for potential hotspots per the AS4482.1 recommended number of locations in localised areas of potential environmental concern (historical house, <0.5 ha – five (5) locations & house/animal yards in south section, ~1 ha – 21 locations);
- Sampling in accordance with EPA IWRG 702 over an elongate soil stockpile – 10 locations.

Soil sampling was completed from the 24th – 26th of June 2020 using a variety of methods including excavator, hand augur and spade to a maximum depth of investigation of 1.4 m bgl. Refer to Figures 3 to 5 for details of the sampling locations and site features attracting further contamination investigation.

Upon completion of the soil sampling, each location was backfilled. Soil samples were labelled by the particular property where the sample was collected and either borehole [BH] or test pit [TP] with their corresponding depth (m bgl) [i.e. BH01/0.1, or TP02/0.1].

New, single use glass containers provided by the laboratory were used in conjunction with latex gloves to avoid contact with sampled soils. All soil samples were preserved on ice during investigations and during transport to the laboratory. Samples were despatched to the laboratory with a relevant Chain of Custody (COC, refer to Appendix D). At each sample location, the soil profile was logged and each sample obtained was entered onto a Sample Master List (SML) in the order of collection to track any incidence of potential cross-contamination (for soil description logs refer to Appendix C).

All sampling equipment was decontaminated between each sampling location in accordance with Atma Environmental's standard in-house decontamination procedures.

5.4 Soil Investigation Observations

BH01 – BH05 were located north of Station St at the location of a suspected historical dwelling with soils consisting of natural brown clayey-SILT, medium to high plasticity and moist extending to between 0.3 to 0.4 m bgl, with trace amounts of surficial tile and brick fragments. Underlying natural soils consisted of dark brown silty-CLAYS, high plasticity and saturated. No intermixed wastes, odours or asbestos-containing materials were encountered within the borehole profiles.

The same soil profile was encountered in other locations in the north and central areas, consisting of brown clayey-SILTs underlain by dark brown silty-CLAYS, but were absent of any trace surficial wastes. The trace-only abundance of tile and brick fragments in BH01 to BH05 are insufficient to restrict the suitability of that area for sensitive purposes on aesthetic grounds but does confirm the PSI finding of a historical dwelling there.

The targeted test pits in several former dams (TP01, TP02, TP03, TP11) encountered the same soil profiles as the majority of the borehole locations consisting of disturbed natural (i.e. local, redeposited) clayey-silts/silty-clays extending to a maximum depth of 1.4 m bgl. Buried wastes were not encountered at any of these locations (i.e. used to backfill dams, or incorporated into the broad site filling to the south of Station St), with non-natural items limited to small singular pieces (towing strap, plastic band) in TP03 and TP10 only.

Fill material was encountered in the area of the dwelling in the south of the site at locations BH14 (silty-gravel to 0.1 m bgl, underlain by natural clayey-silt/silty-clay); and BH15 and BH19 (gravelly-silt ranging from 0.4 to 0.5 m bgl). No intermixed wastes, odours or asbestos-containing materials were encountered at these or other boreholes.

To investigate the extent of possible asbestos impacts in the area of the dam, three un-numbered exploratory test pits by backhoe were completed in hummocky ground on the dam's east side (refer to Figure 5). The observed soil profile in each was consistent with natural and redeposited natural soils found elsewhere at the site, with no admixed wastes or visible asbestos. At the time of this investigation, the wider area was overgrown and a full surface inspection for additional ACM could not be conducted.

Stockpiled material was also sampled (SP1-1 to SP1-10) and was logged as clayey-silt fill material with large boulders, minor fine to coarse gravels. No ACM was identified in this material, however, limited quantities of bricks and concrete readily separated were noted scattered around the stockpile.

No other evidence of suspected land contamination (e.g. staining, odours, stressed vegetation etc.) was identified.

5.5 Laboratory Analysis

The selected sampling schedule was based on the contaminants of potential concern identified by field observations and past land uses, including: metals, total recoverable hydrocarbons (TRHs), benzene, toluene, ethyl benzene, xylene and naphthalene (BTEXN), organochlorine pesticides

(OCPs), fluoride, cation exchange capacity (CEC), pH ($CaCl_2$) and a full, multi-parameter NEPM EIL/HIL screen. Samples SP1-1 to SP1-10 were tested against EPA IWRG 621 disposal classification parameters for off-site soil disposal categorisation, if required.

The laboratory used for primary soil sample analysis was Eurofins Environment Testing ('Eurofins'). The laboratory used for secondary soil sample analysis was Australian Laboratory Services Pty Ltd ('ALS'). Both laboratories used National Association of Testing Authorities (NATA) accredited methods for the testing performed. Refer to Appendix D for the Chain of Custody documentation and full laboratory reports.

5.6 Soil Analysis Results & Discussion

All samples analysed for total recoverable and mono-aromatic hydrocarbons and for organochlorine pesticides were non-detectable. Testing of samples for metals (in greater frequency) identified only zinc as being above the adopted site assessment criteria. A summary comparison of the laboratory analysis results with respect to the most sensitive ecological and human health assessment guidelines applicable to any proposed future land use is given in Table 1. A summary of the results is provided below.

Human Health

All soil sample results (targeted and grid-based) were reported below adopted human health investigation and screening levels (HILs/HSLs). Based on the sampling program results, further soil investigation with respect to potentially negative human health effects is not required.

Maintenance of Ecosystems & Production of Food & Fibre

All soil sample results were reported below adopted ecological health investigation and screening levels (EILs) with the exception of BH09/0.1 and SP1-10 -- each with zinc concentrations of 220 mg/kg, slightly above the EIL criterion of 200 mg/kg.

The as-reported zinc results are not considered to signify a need for further ecological investigation owing to: a) the minor degree to which they exceed the adopted the EIL, b) the much lower average concentration over the site, and c) the conservative nature of the EIL (e.g. does not account for ambient background concentration).

No other contaminant was reported as exceeded an adopted EIL or ESL in any sample.

Buildings & Structures

The site is not located on an area of probable acid sulphate soil. Soils developed on Newer Volcanic basalt soils are generally of higher pH, posing a reduced risk of potential impact to buildings and structures. Of the two samples tested for pH (1:5 aqueous extract), none recorded a value of 4 or lower. Samples for pH ($CaCl_2$ extract) were somewhat lower, ranging 4.1 to 6.9 units.

Aesthetics

Soils (minus above ground materials) must not be 'offensive to the senses'. Locations of wastes are confirmed to singular items in TP03 and TP10, trace amounts of fine rubble at the historical house and scattered concrete brick and concrete rubble (readily removed) in an elongated soil stockpile. Buried wastes were not used as backfilling in any of the former dams. Given these findings, the site is considered to meet aesthetic criteria for future sensitive land uses.

General above ground rubbish noted around the residential dwelling should be removed as part of future demolition works.

6 QUALITY ASSURANCE AND CONTROL

Atma Environmental's procedures for soil sampling, quality assurance and equipment decontamination were followed. These procedures are comparable with those found in the Australian Standard AS4482.1 – 2005 (*Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds*) and AS4482.2-1999 (*Guide to the sampling and investigation of potentially contaminated soil, Part 2: Volatile Substances*).

6.1 Decontamination, Trip & Field Blanks

Rinsate blanks should be collected where cross-contamination of samples is likely to impact on the validity of the sampling and assessment process. Rinsate, collected during the sampling equipment decontamination process should be tested for contaminants of concern. Three equipment rinsate samples were collected during the soil investigation with two of these (DECON-240620, DECON-250620) tested for a suite of 17 metals. Analytical results indicated all concentrations in the rinsate blanks were below laboratory detection limits, indicating the equipment decontamination procedure was effective and the risk of cross contamination between sampling locations is unlikely.

A trip blank is for the purpose of providing a control sample against contamination potentially introduced during transport of samples from the field to the laboratory. Three trip blank samples were collected during the soil investigation, sent to the laboratory and put on hold. As there were no conditions (such as container breakage) that could affect sample integrity during transport, the trip blanks didn't require testing.

Field blanks are for the purpose of providing a control against contamination potentially introduced to samples during field works. Three field blank samples (one per day of fieldworks) were collected during the soil investigation, sent to the laboratory and put on hold. As field sampling conditions were normal (i.e. no extraneous influences present), the field blanks were not tested.

6.2 Blind QC Replicate Testing

Replicate samples, comprising two containers of the same media (sample) are created in the field and submitted to the primary laboratory or to a secondary laboratory in a blind test of reporting accuracy.

The results of the check (replicate) sample are assessed against the primary sample in terms of the Relative Percent Difference, or 'RPD' (difference in results divided by the mean of the results, x 100).

The permitted RPD deviance between samples is 'unlimited' for results that are less than 10 times the Limit of Reporting (LOR), 0% - 50% RPD for results between 10 and 20 times the LOR, and 0% - 20% RPD for results greater than 20 times the LOR.

Seventy-five primary samples were analysed as part of the investigation. Seven blind replicate samples (with paired primary samples) were analysed as part of this investigation as detailed Table 2.2.

Individual RPD results are calculated for metals, TRHs and PAHs with comparative metal results in the primary sample BH20/0.1 vs the replicate duplicate and split samples being markedly higher. The difference in RPDs may be attributed to the replicate samples not being homogeneous to the primary sample. This suggests that the contamination reported in the primary sample BH20/0.1 is very superficial in nature. That is, contaminant levels drop quickly in the immediately subsequent augur used to obtain the two replicate samples. A comparison of the results for DUP250620 vs SPLIT250620 shows much better agreement in the interlab results. The RPDs above accepted deviance are assessed as being an artifact of the sampling procedure and the superficial nature of contamination at this location, not laboratory error.

Overall, the lab data is considered to be acceptably reproducible, with some variability inherent to the sampling and analysis process. The higher values are considered in our assessment.

7 ASBESTOS CLEARANCE WORKS

Irrespective that the current investigation did not observe visible asbestos in an area where it had previously been reported, potential human health risks arising from the earlier PSI observations remained. This area is understood to be intended for future drainage purposes (vs. sensitive uses).

To address this issue a further scope of remediation work was completed to remove asbestos as far as practicable in the area of the dam. The methodology and results of this work were documented under separate cover (Atma Environmental, 25 August 2020) and provided here as Appendix E.

The remediation work involved additional inspections of the general area, vegetation removal over the eastern side of the dam where asbestos had been spotted during the PSI work, vegetation/soil raking and asbestos picking by the licensed removalist; with subsequent hygienist clearance of the works area.

8 CONCLUSIONS

An earlier PSI of the land (Atma Environmental, 7 Aug 2019) included an environmental and historical records review with a detailed environmental site inspection. The PSI confirmed that the principal past and current land use has been farming, township and rural residential, posing an overall low potential for site contamination. The site was therefore not defined as 'potentially contaminated' in accordance with this Ministerial Direction No. 1. Within the context of Ministerial Direction No. 1 and the known site history, an environmental audit was not considered requisite. A detailed environmental site investigation was, however, recommended in order to confirm the contamination status of the land with respect to potential future sensitive land uses.

An aerial photo review and our field observations confirmed that the site condition had not changed since completion of the PSI report and there were no additional sources, or land uses posing a potential for site contamination that were not already identified.

For the assessment of site contamination, the most applicable comparative criteria with respect to development under the Township zoning was considered to be NEPM ecological and human health-based investigation/screening levels relevant to urban residential/public open spaces (for ecological) and 'A' Setting or standard residential exposures (for health) and were adopted.

Soil sampling by a variety of methods at 50 locales was programmed to provide a systematic and detailed appraisal of potential site investigation. This included targeted and grid-based sampling over a historical house area, an area of recent filling, four infilled dam areas, a large pile of imported soil/rock (some hard wastes) and an existing house area in the south.

The field investigation found trace tile and brick fragments near a former house, an absence of buried wastes within former dams, imported filling at some locations around the southern house area but no intermixed wastes, odours or asbestos-containing material including within three exploratory test pits near the dam. A long soil pile was observed to contain limited quantities of bricks and concrete which can be readily separated. No other evidence of suspected land contamination (e.g. staining, odours, stressed vegetation etc.) was identified.

All samples analysed for total recoverable and mono-aromatic hydrocarbons and for organochlorine pesticides were non-detectable. Testing of 75 samples for metals identified only zinc as being marginally above the adopted site assessment criteria (ecological) in two samples. All soil sample results (targeted and grid-based) were reported below adopted human health investigation and screening levels (HILs/HSLs). Based on the sampling program results, further soil investigation with respect to potentially negative ecological or human health effects is not required. The site is also considered to meet buildings & structures and aesthetic criteria for future sensitive land uses.

Irrespective that the current investigation did not observe visible asbestos in an area where it had previously been reported, potential human health risks arising from the earlier PSI observations were resolved by the subsequent completion of an asbestos removal and clearance program over the affected area. Following the removal of vegetation, soil raking and picking by a licensed

asbestos removalist, a clearance certificate was provided for the east side of the dam area where asbestos was previously noted.

The environmental site assessment has not identified any locations where further contamination investigation, management, or remediation is considered necessary to protect values pertinent for the proposed future sensitive and other land uses. Given the findings of the environmental site assessment an environmental audit is not considered requisite to ensure the suitability of the land for residential purposes.

Any soils which are imported or removed to the site (and any wastes generated during site development) should be managed in accordance with EPA Victoria Industrial Waste Resource Guidelines.

9 LIMITATIONS AND EXCEPTIONS OF INVESTIGATION

The report consists of the scope of work outlined previously. This report describes the work undertaken and has been compiled for the use of Clarkefield Developments Pty Ltd. Its conclusions are only valid for the purpose for which it was requested. This report is not an 'environmental audit' within the meaning of the *Environment Protection Amendment Bill 2018 (Vic).*

It is valid only when it is in original and complete form, and any person or company other than Clarkefield Developments Pty Ltd who rely on the report without specific reference to and permission from Atma Environmental Pty Ltd does so at their own risk.

While every care has been taken in the compilation of this report, to the extent that its conclusions are based on the analysis of the data made available by your organisation or by a third party, no responsibility or liability is accepted for consequences arising from either errors or omissions in that data, or from factors or data which were not made available to Atma Environmental Pty Ltd or which Atma Environmental Pty Ltd could not ascertain by reasonable inquiry in the ordinary course of its investigation, nor for any commercial decisions taken as a result of the report.

The site assessment has not specifically considered above ground issues such as lead-based paint and installed asbestos containing building products, nor has it included an intrusive assessment of groundwater contamination. Environmental site assessments document property conditions at the time they are conducted. These conditions may change over time. In addition, contamination (potentially of greater or lesser severity than as reported) may exist at other locations, which have not been tested. The results of additional site testing and future changes in assessment guidelines, criteria or legislative requirements may alter the conclusions of this report and any recommendations flowing therefrom.

10 REFERENCES

Atma Environmental *"Preliminary Site Investigation – Area 12A & 13, Clarkefield, Vic."* [Ref. 1788] 7 August 2019.

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Friebel, E & Nadebaum, P CRC CARE Technical Report no. 10 CRC for Contamination Assessment and Remediation of the Environment *'Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater, Summary'* Adelaide, Australia, September 2011.

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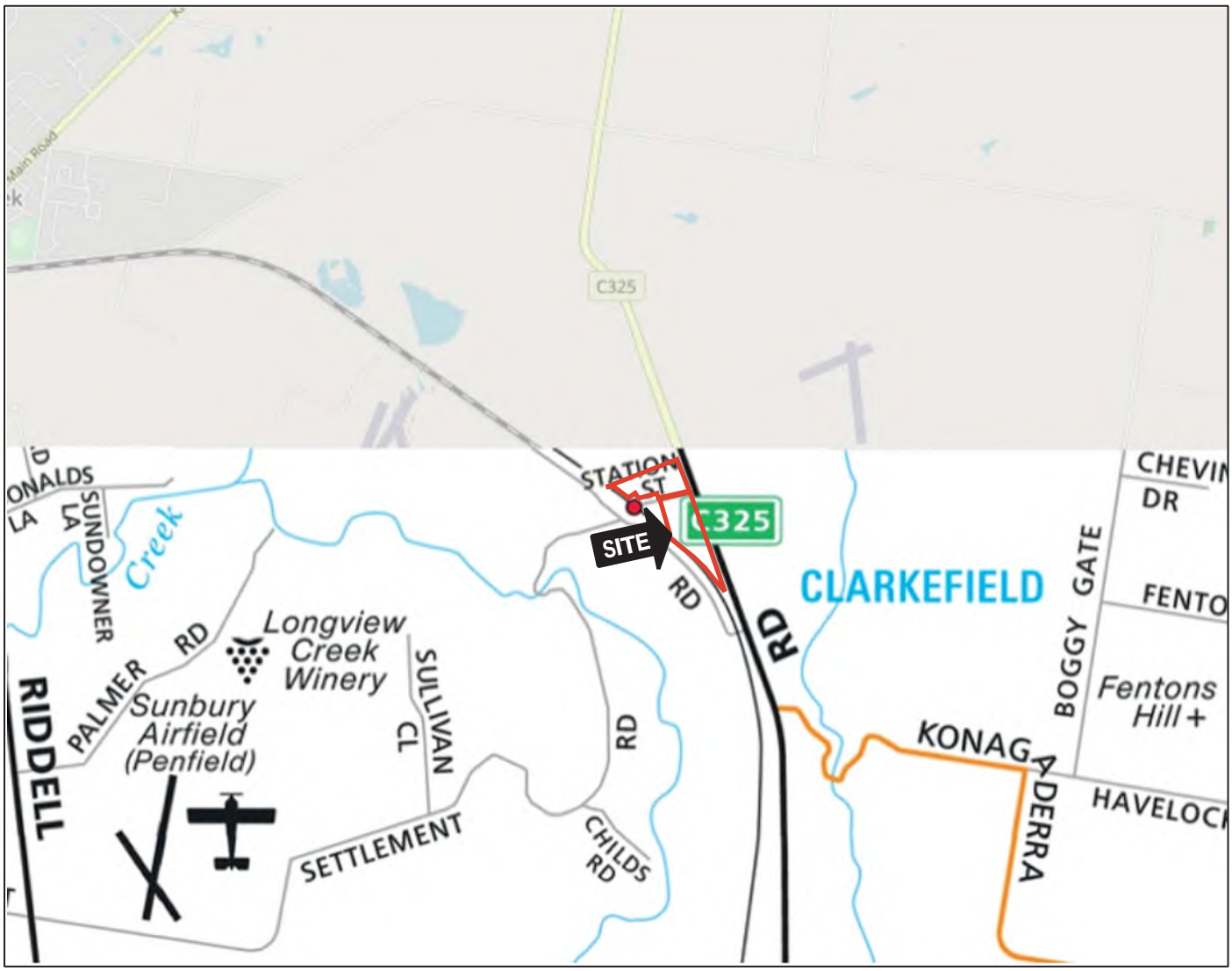
Victoria Government Gazette, "*State Environmental Protection Policy (Prevention & Management of Contamination of Land)*", No. S 95, June 2002.



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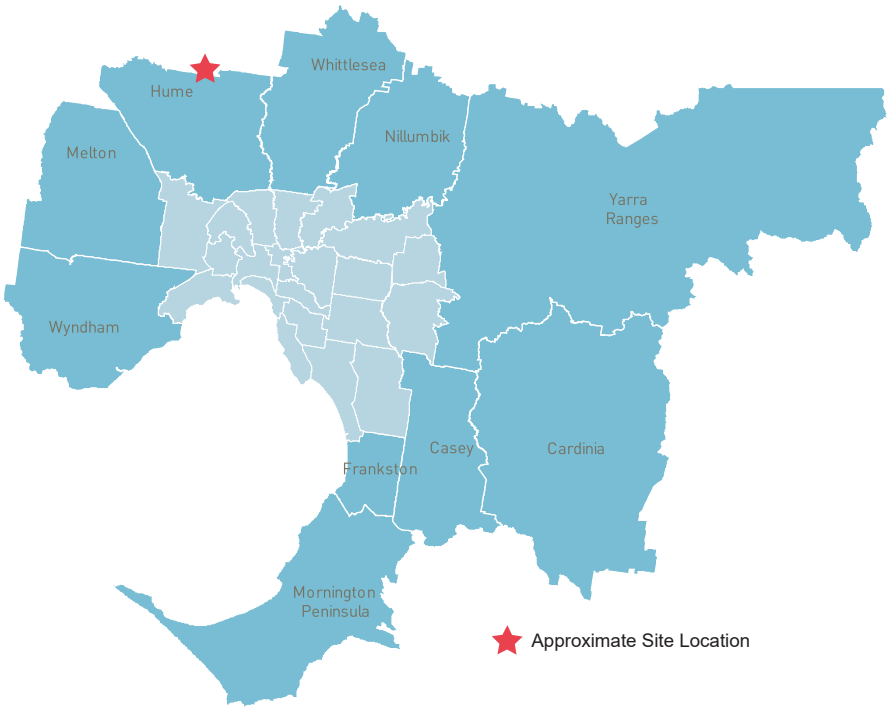
Approximate Scale:

0 1 2 4 6km

N



Atma *Environmental*

Client:

Clarkefield Developments Pty Ltd

Project: #1894 Clarkefield - PSI

Drawn by: H.B. Dated: 15/07/2020 Status: Final

Figure 1. Site Location

Imagery: *Nearmap (15 April 2020)*

Approximate Scale:

0 57 114 228 342 m

LEGEND:

- Investigation Area
- Backfilled Dam
- Railway
- Area Filled c. 2013

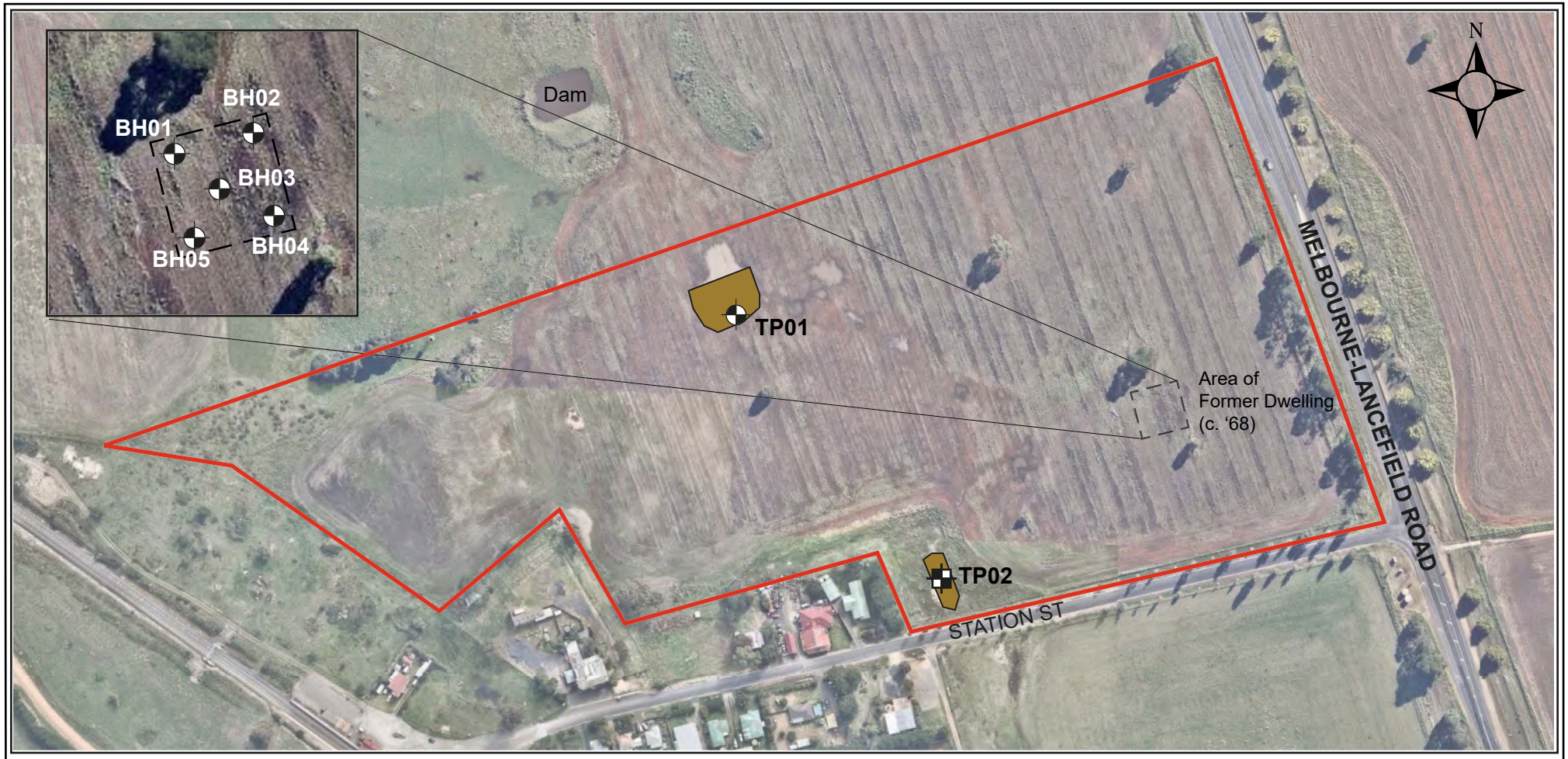
Atma Environmental

Client:
CLARKEFIELD DEVELOPMENTS PTY LTD

Project: 1894 - Clarkefield - ESA

Drawn by: H.B. Dated: 16/07/2020 Revision: Final

Figure 2. Overall Site Details



Imagery: *Nearmap (15 April 2020)*

Approximate Scale:

0 72 144 216 288 m

LEGEND:

- Investigation Area
- Backfilled Dam
- Borehole
- Test Pit

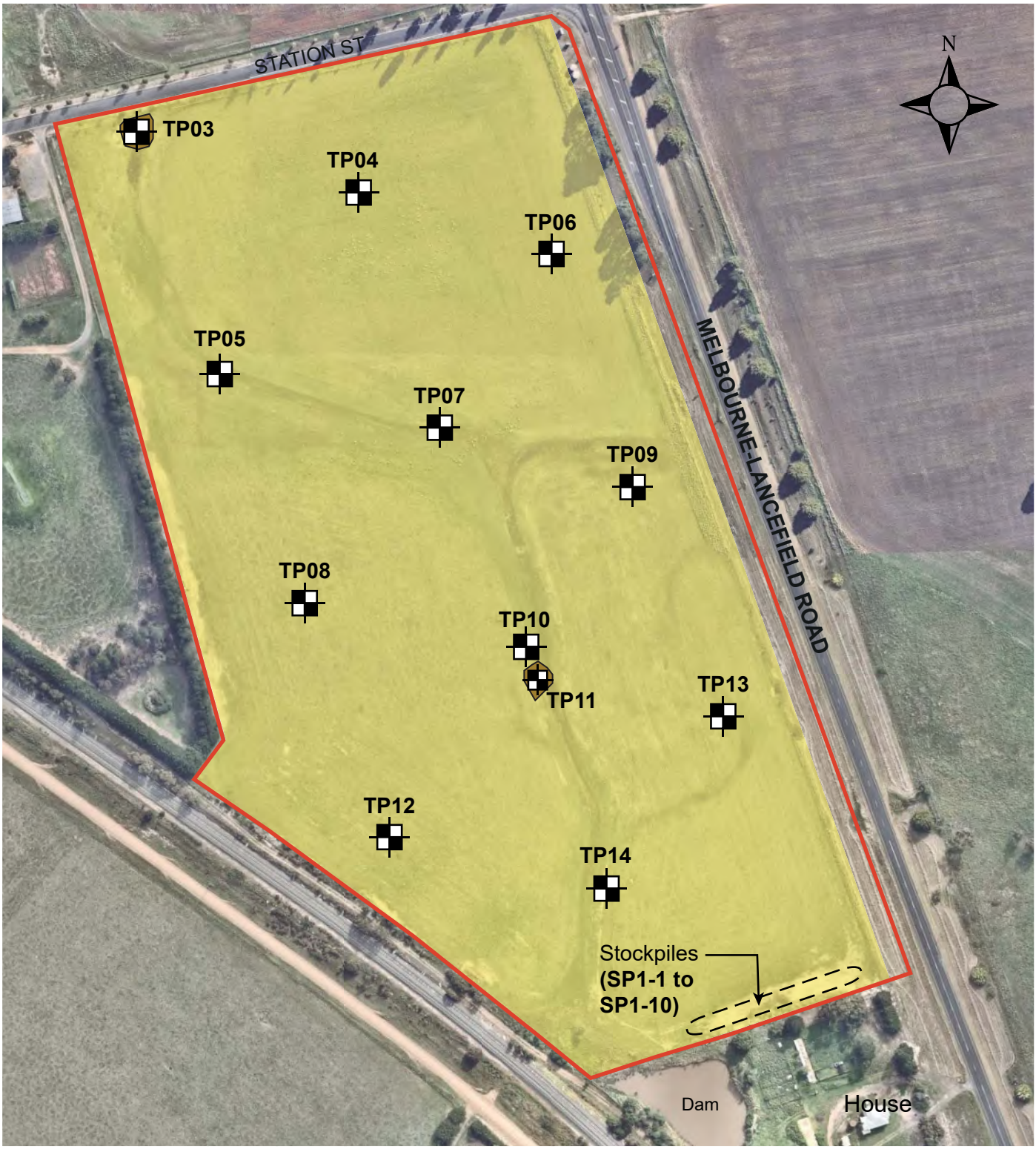
Atma Environmental

Client:
CLARKEFIELD DEVELOPMENTS PTY LTD

Project: 1894 - Clarkefield - ESA

Drawn by: H.B. Dated: 16/07/2020 Status: Final

Figure 3. Sampling Locations (North)



Imagery: *Nearmap (15 April 2020)*

Approximate Scale:

0 27 54 108 162m

LEGEND:

- Investigation Area
- Backfilled Dam
- Area Filled c. 2013
- Test Pit Location

Atma *Environmental*

Client:
CLARKEFIELD DEVELOPMENTS PTY LTD

Project: 1894 - Clarkefield - ESA

Drawn by: H.B. Dated: 16/07/2020 Revision: Final

Figure 4. Sampling Locations (Centre)

Imagery: *Nearmap (15 April 2020)*

Approximate Scale:

0 10 20 40 60 m

LEGEND:

- Site Boundary
- Area of Environmental Interest
- Borehole
- Driveway
- Test Trench
- Drain
- Approximate Fill Material Extent
- Groundwater Bore

Atma Environmental

Client:
CLARKEFIELD DEVELOPMENTS PTY LTD

Project: 1894 - Clarkefield - ESA

Drawn by: H.B. Dated: 16/07/2020 Revision: Final

Figure 5. Sampling Locations (South)

Table 1. Results Summary vs Ecological & Human Health Assessment Criteria

PROJECT: Clarkefield (#1894)
Laboratory Report No: 728529

Atma Environmental

Sample Identification	Date Sampled	Laboratory	Laboratory Report No.	Material Type	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Boron (B)	Cadmium (Cd)	Total Chromium (Cr)[D]	Hexavalent Chromium	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Tin (Sn)	Zinc (Zn)	Cyanide (CN−)
Ecological Investigation & Screening Levels *Residential / Public Open Space*					100	n/a	n/a	n/a	n/a	200	n/a	n/a	85	1,100	n/a	n/a	n/a	160	n/a	n/a	n/a	200	n/a
Health Investigation & Screening Levels *'A' Setting - Low Density Residential*					100	n/a	60	4,500	20	n/a	100	100	6,000	300	3,800	40	n/a	400	200	n/a	n/a	7,400	250
Boreholes																							
BH01/0.1	24-Jun-20	Eurofins	728529	Nat	3.6	-	< 2	< 10	< 0.4	30	< 1	5.0	8.1	71	100	< 0.1	-	10	< 2	-	-	72	< 5
BH01/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02/0.1	24-Jun-20	Eurofins	728529	Nat	4.0	95	< 2	< 10	< 0.4	46	-	10	53	98	120	< 0.1	< 5	23	< 2	< 0.2	< 10	160	-
BH02/0.5	24-Jun-20	Eurofins	728529	Nat	2.9	75	< 2	11	< 0.4	61	-	14	14	12	99	< 0.1	< 5	51	< 2	< 0.2	< 10	24	-
BH03/0.1	24-Jun-20	Eurofins	728529	Nat	13	55	< 2	< 10	< 0.4	70	-	9.5	19	72	120	< 0.1	< 5	24	< 2	< 0.2	< 10	150	-
BH03/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04/0.1	24-Jun-20	Eurofins	728529	Nat	2.8	73	< 2	< 10	< 0.4	27	-	6.3	11	78	140	< 0.1	< 5	12	< 2	< 0.2	< 10	150	-
BH04/0.5	24-Jun-20	Eurofins	728529	Nat	5.1	70	2.2	< 10	< 0.4	76	-	33	19	20	84	< 0.1	< 5	62	< 2	< 0.2	< 10	35	-
BH05/0.1	24-Jun-20	Eurofins	728529	Nat	3.2	-	< 2	< 10	< 0.4	63	< 1	21	18	71	160	< 0.1	-	39	< 2	-	-	100	< 5
BH05/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06/0.1	24-Jun-20	Eurofins	728529	Nat	2.3	38	< 2	< 10	< 0.4	25	-	5.8	7.5	12	83	< 0.1	< 5	11	< 2	< 0.2	< 10	45	-
BH06/0.5	24-Jun-20	Eurofins	728529	Nat	< 2	200	< 2	< 10	< 0.4	29	-	9.8	6.5	7.2	41	< 0.1	< 5	21	< 2	< 0.2	< 10	8.2	-
BH07/0.1	24-Jun-20	Eurofins	728529	Nat	16	29	< 2	< 10	< 0.4	41	-	< 5	5.7	16	24	< 0.1	< 5	8.7	< 2	< 0.2	< 10	22	-
BH07/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08/0.1	24-Jun-20	Eurofins	728529	Nat	4.1	67	< 2	< 10	< 0.4	19	-	< 5	7.7	17	75	< 0.1	< 5	6.4	< 2	< 0.2	< 10	40	-
BH08/0.5	24-Jun-20	Eurofins	728529	Nat	2.2	34	< 2	< 10	< 0.4	33	-	7.6	6.3	10	23	< 0.1	< 5	13	< 2	< 0.2	< 10	8.4	-
BH09/0.1	24-Jun-20	Eurofins	728529	Nat	2.5	100	< 2	< 10	< 0.4	26	-	8.4	18	26	83	< 0.1	< 5	17	< 2	< 0.2	< 10	**220**	-
BH09/0.5	24-Jun-20	Eurofins	728529	Nat	< 2	500	< 2	< 10	< 0.4	53	-	25	11	11	170	< 0.1	< 5	48	< 2	< 0.2	< 10	22	-
BH10/0.1	24-Jun-20	Eurofins	728529	Nat	6.4	61	< 2	< 10	< 0.4	23	-	5.6	11	25	80	< 0.1	< 5	11	< 2	< 0.2	< 10	64	-
BH10/0.5	24-Jun-20	Eurofins	728529	Nat	< 2	38	< 2	< 10	< 0.4	50	-	13	8.6	10	55	< 0.1	< 5	25	< 2	< 0.2	< 10	18	-
BH11/0.1	24-Jun-20	Eurofins	728529	Nat	< 2	17	< 2	< 10	< 0.4	6.3	-	< 5	< 5	14	28	< 0.1	< 5	< 5	< 2	< 0.2	< 10	27	-
BH11/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12/0.1	24-Jun-20	Eurofins	728529	Nat	3.2	260	< 2	18	< 0.4	46	-	22	19	15	470	< 0.1	< 5	51	< 2	< 0.2	< 10	58	-
BH12/0.5	24-Jun-20	Eurofins	728529	Nat	3.9	170	< 2	11	< 0.4	35	-	12	13	19	240	< 0.1	< 5	31	< 2	< 0.2	< 10	33	-
BH13/0.1	24-Jun-20	Eurofins	728529	Nat	4.0	-	< 2	< 10	< 0.4	23	< 1	11	15	12	240	< 0.1	-	25	< 2	-	-	55	< 5
BH13/0.5	24-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14/0.1	24-Jun-20	Eurofins	728529	Fill	< 2	43	< 2	< 10	< 0.4	37	-	18	21	< 5	290	< 0.1	< 5	96	< 2	< 0.2	< 10	46	-
BH14/0.5	24-Jun-20	Eurofins	728529	Nat	5.7	22	< 2	< 10	< 0.4	50	-	6.5	6.7	13	40	< 0.1	< 5	15	< 2	< 0.2	< 10	16	-
BH15/0.1	25-Jun-20	Eurofins	728529	D Nat	2.6	150	< 2	< 10	< 0.4	43	-	15	25	8.6	300	< 0.1	< 5	42	< 2	< 0.2	< 10	40	-
BH15/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16/0.1	25-Jun-20	Eurofins	728529	Nat	2.4	200	< 2	16	< 0.4	44	-	18	13	11	300	< 0.1	< 5	38	< 2	< 0.2	< 10	26	-
BH16/0.5	25-Jun-20	Eurofins	728529	Nat	2.2	130	< 2	20	< 0.4	46	-	15	13	12	240	< 0.1	< 5	31	< 2	< 0.2	< 10	23	-
BH17/0.1	25-Jun-20	Eurofins	728529	Nat	2.2	360	< 2	12	< 0.4	39	-	20	16	7.6	460	< 0.1	< 5	52	< 2	< 0.2	< 10	30	-
BH17/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18/0.1	25-Jun-20	Eurofins	728529	Nat	3.6	39	< 2	< 10	< 0.4	22	-	< 5	6.1	8.6	25	< 0.1	< 5	6.5	< 2	< 0.2	< 10	21	-
BH18/0.5	25-Jun-20	Eurofins	728529	Nat	3.6	200	< 2	< 10	< 0.4	53	-	9.7	11	15	45	< 0.1	< 5	30	< 2	< 0.2	< 10	15	-
BH19/0.1	25-Jun-20	Eurofins	728529	Fill	2.4	200	< 2	12	< 0.4	37	-	22	22	7.7	470	< 0.1	< 5	68	< 2	< 0.2	< 10	45	-
BH19/0.5	25-Jun-20	Eurofins	728529	Nat	11	210	< 2	< 10	< 0.4	42	-	11	16	25	210	< 0.1	< 5	28	< 2	< 0.2	< 10	40	-
BH20/0.1	25-Jun-20	Eurofins	728529	Nat	51	120	50	58	6.7	79	-	60	64	92	170	1.4	55	63	47	6.6	56	120	-
BH20/0.5	25-Jun-20	Eurofins	728529	Nat	4.8	64	< 2	< 10	< 0.4	59	-	18	12	14	43	< 0.1	< 5	27	< 2	< 0.2	< 10	16	-
BH21/0.1	25-Jun-20	Eurofins	728529	Nat	< 2	28	< 2	< 10	< 0.4	14	-	< 5	< 5	8.7	29	< 0.1	< 5	< 5	< 2	< 0.2	< 10	8.8	-
BH21/0.5	25-Jun-20	Eurofins	728529	Nat	< 2	91	< 2	< 10	< 0.4	33	-	11	7.7	10	26	< 0.1	< 5	16	< 2	< 0.2	< 10	10	-
BH22/0.1	25-Jun-20	Eurofins	728529	Nat	4.2	45	< 2	< 10	< 0.4	16	-	< 5	8.8	20	63	< 0.1	< 5	5.7	< 2	< 0.2	< 10	17	-
BH22/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23/0.1	25-Jun-20	Eurofins	728529	Nat	2.7	42	< 2	< 10	< 0.4	17	-	< 5	8.1	10	42	< 0.1	< 5	6.9	< 2	< 0.2	< 10	38	-
BH23/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24/0.1	25-Jun-20	Eurofins	728529	Nat	6.9	36	< 2	< 10	< 0.4	21	-	< 5	5.4	12	70	< 0.1	< 5	6.1	< 2	< 0.2	< 10	20	-
BH24/0.5	25-Jun-20	Eurofins	728529	Nat	< 2	65	< 2	< 10	< 0.4	32	-	12	7.3	8.4	38	< 0.1	< 5	16	< 2	< 0.2	< 10	8	-
BH25/0.1	25-Jun-20	Eurofins	728529	Nat	4.6	27	< 2	< 10	< 0.4	15	-	< 5	5.9	18	54	< 0.1	< 5	< 5	< 2	< 0.2	< 10	38	-
BH25/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26/0.1	25-Jun-20	Eurofins	728529	Nat	4.0	27	< 2	< 10	< 0.4	21	-	< 5	6.7	10	52	< 0.1	< 5	< 5	< 2	< 0.2	< 10	65	-
BH26/0.5	25-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Test Pits																							
TP01/0.1	26-Jun-20	Eurofins	728529	Nat	4.7	160	< 2	< 10	< 0.4	25	-	< 5	< 5	14	39	< 0.1	< 5	7.9	< 2	< 0.2	< 10	6.3	-
TP01/0.5	26-Jun-20	Eurofins	728529	Nat	19	2700	< 2	< 10	< 0.4	65	-	18	11	27	35	< 0.1	< 5	36	< 2	< 0.2	< 10	8.7	-
TP01/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	26-Jun-20	Eurofins	728529	Nat	3.7	66	< 2	< 10	< 0.4	25	-	< 5	5.4	12	31	< 0.1	< 5	8.2	< 2	< 0.2	< 10	6.7	-
TP02/0.5	26-Jun-20	Eurofins	728529	Nat	6.4	1100	< 2	< 10	< 0.4	49	-	13	8.0	17	32	< 0.1	< 5	21	< 2	< 0.2	< 10	10	-
TP02/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/0.1	26-Jun-20	Eurofins	728529	D Nat	2.9	310	< 2	< 10	< 0.4	37	-	11	11	17	120	< 0.1	< 5	22	< 2	< 0.2	< 10	26	-
TP03/0.5	26-Jun-20	Eurofins	728529	Nat	8.1	270	< 2	< 10	< 0.4	31	-	7.1	7.5	16	100	< 0.1	< 5	14	< 2	< 0.2	< 10	19	-
TP03/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/1.4	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.1	26-Jun-20	Eurofins	728529	Nat	2.6	-	< 2	< 10	< 0.4	26	< 1	< 5	< 5	12	91	< 0.1	-	6.7	< 2	-	-	9.5	< 5
TP04/0.5	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	26-Jun-20	Eurofins	728529	Nat	6.7	260	< 2	< 10	< 0.4	26	-	7.9	7.2	16	120	< 0.1	< 5	13	< 2	< 0.2	< 10	17	-
TP05/0.5	26-Jun-20	Eurofins	728529	Nat	10	440	< 2	< 10	< 0.4	40	-	7.3	8.3	18	24	< 0.1	< 5	15	< 2	< 0.2	< 10	6	-
TP05/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	26-Jun-20	Eurofins	728529	Nat	3.1	48	< 2	< 10	< 0.4	46	-	11	10	15	220	< 0.1	< 5	20	< 2	< 0.2	< 10	20	-
TP06/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	61	< 2	< 10	< 0.4	52	-	24	14	9	170	< 0.1	< 5	53	< 2	< 0.2	< 10	15	-
TP06/0.8	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	26-Jun-20	Eurofins	728529	Nat	< 2	54	< 2	< 10	< 0.4	20	-	5	5.9	12	83	< 0.1	< 5	7.4	< 2	< 0.2	< 10	9.4	-
TP07/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	41	< 2	< 10	< 0.4	45	-	13	12	12	42	< 0.1	< 5	19	< 2	< 0.2	< 10	8.4	-
TP07/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	26-Jun-20	Eurofins	728529	Nat	< 2	45	< 2	< 10	< 0.4	13	-	< 5	5.2	19	39	< 0.1	< 5	< 5	< 2	< 0.2	< 10	8	-
TP08/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	120	< 2	< 10	< 0.4	32	-	9.8	7.9	13	52	< 0.1	< 5	17	< 2	< 0.2	< 10	9.9	-
TP08/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP09/0.1	26-Jun-20	Eurofins	728529	Nat	< 2	330	< 2	< 10	< 0.4	31	-	14	7.8	13	56	< 0.1	< 5	20	< 2	< 0.2	< 10	14	-
TP09/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	820	< 2	< 10	< 0.4	32	-	15	6.9	11	71	< 0.1	< 5	17	< 2	< 0.2	< 10	14	-
TP09/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	26-Jun-20	Eurofins	728529	Nat	< 2	56	< 2	< 10	< 0.4	32	-	6.6	5.5	11	52	< 0.1	< 5	11	< 2	< 0.2	< 10	13	-
TP10/0.5	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11/0.1	26-Jun-20	Eurofins	728529	Nat	5.2	370	< 2	< 10	< 0.4	38	-	9.7	8.9	19	110	< 0.1	< 5	18	< 2	< 0.2	< 10	20	-
TP11/0.5	26-Jun-20	Eurofins	728529	Nat	6.8	340	< 2	< 10	< 0.4	36	-	13	19	21	220	< 0.1	< 5	29	< 2	< 0.2	< 10	29	-
TP11/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12/0.1	26-Jun-20	Eurofins	728529	Nat	5.2	-	< 2	< 10	< 0.4	28	< 1	< 5	5.9	14	90	< 0.1	-	8.3	< 2	-	-	9.3	< 5
TP12/0.5	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP12/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sample Identification	TRHs					BTEXN					PAHs			PHENOLS			OCPs										HERBICIDES						Other OCPs			PCBs	OTHER		
	T.R.H (C6-C10)[B]	T.R.H (>C10-C16)	T.R.H (>C10-C16)[C]	T.R.H (>C16-C34)	T.R.H (>C34-C40)	Benzene	Toluene	Ethyl Benzene	Xylene	Naphthalene	PAHs (Total)	Benzo-a-Pyrene	Sum of Carcinogenic PAHs (as BaP TEQ)	Phenol	Pentachlorophenol	Cresols	DDT+DDE+DDD	Aldrin and dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene	2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Atrazine	Chlorpyrifos	Bifenthrin	PCBs (total)	Fluoride (total, fusion)	Cation Exchange Capacity (cmolc/kg)	pH (1:5 soil:CaCl2 extract)
Ecological Investigation & Screening Levels *Residential / Public Open Space*	180	120	n/a	300	2800	50	85	70	45	170	n/a	0.7	n/a	n/a	n/a	n/a	180	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Health Investigation & Screening Levels *'A' Setting - Low Density Residential*	45	n/a	110	4500[A]	6300[A]	0.5	160	55	40	3.0	300	n/a	3.0	3,000	100	400	240	6.0	50	270	10	6.0	10	300	10	20	600	900	600	600	600	4,500	230	160	600	1.0	n/a	n/a	n/a
Boreholes																																							
BH01/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.4	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.05	< 0.1	-	-	4.8
BH01/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.4	< 0.05	-	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.05	< 0.1	-	-	-
BH05/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	5.4
BH06/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1
BH08/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH10/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8
BH12/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.4	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.01	< 1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.05	< 0.1	190	-	-
BH13/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9
BH15/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19/0.1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1. Results Summary vs Ecological & Human Health Assessment Criteria

PROJECT: Clarkefield (#1894)
Laboratory Report No: 728529

Atma Environmental

Sample Identification	Date Sampled	Laboratory	Laboratory Report No.	Material Type	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Boron (B)	Cadmium (Cd)	Total Chromium (Cr[D])	Hexavalent Chromium	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Tin (Sn)	Zinc (Zn)	Cyanide (CN−)
TP13/0.1	26-Jun-20	Eurofins	728529	Nat	2.8	120	< 2	< 10	< 0.4	25	-	10	15	21	330	< 0.1	< 5	21	< 2	< 0.2	< 10	30	-
TP13/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	310	< 2	< 10	< 0.4	28	-	9.9	8.7	10	28	< 0.1	< 5	15	< 2	< 0.2	< 10	9.5	-
TP13/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/0.1	26-Jun-20	Eurofins	728529	Nat	2.1	37	< 2	< 10	< 0.4	19	-	< 5	5.3	10	68	< 0.1	< 5	6.9	< 2	< 0.2	< 10	12	-
TP14/0.5	26-Jun-20	Eurofins	728529	Nat	< 2	69	< 2	< 10	< 0.4	43	-	13	6.9	11	42	< 0.1	< 5	20	< 2	< 0.2	< 10	11	-
TP14/1.0	26-Jun-20	Eurofins	728529	Nat	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockpile Samples																							
SP1-1	25-Jun-20	Eurofins	728529	Fill	5.1	-	-	-	< 0.4	33	< 1	-	11	23	-	< 0.1	< 5	13	< 2	< 0.2	< 10	38	< 5
SP1-2	25-Jun-20	Eurofins	728529	Fill	< 2	220	< 2	16	< 0.4	39	-	17	9.7	9.2	180	< 0.1	< 5	33	< 2	< 0.2	< 10	20	-
SP1-3	25-Jun-20	Eurofins	728529	Fill	< 2	320	< 2	11	< 0.4	33	-	24	8.6	7.8	240	< 0.1	< 5	49	< 2	< 0.2	< 10	19	-
SP1-4	25-Jun-20	Eurofins	728529	Fill	2.7	240	< 2	14	< 0.4	35	-	20	17	8.4	340	< 0.1	< 5	51	< 2	< 0.2	< 10	36	-
SP1-5	25-Jun-20	Eurofins	728529	Fill	2.4	200	< 2	11	< 0.4	39	-	23	23	7.5	520	< 0.1	< 5	68	< 2	< 0.2	< 10	45	-
SP1-6	25-Jun-20	Eurofins	728529	Fill	< 2	330	< 2	20	< 0.4	52	-	18	15	9.1	320	< 0.1	< 5	43	< 2	< 0.2	< 10	30	-
SP1-7	25-Jun-20	Eurofins	728529	Fill	3.3	250	< 2	< 10	< 0.4	31	-	23	27	5.2	500	< 0.1	< 5	78	< 2	< 0.2	< 10	58	-
SP1-8	25-Jun-20	Eurofins	728529	Fill	< 2	220	< 2	< 10	< 0.4	27	-	24	25	< 5	500	< 0.1	< 5	83	< 2	< 0.2	< 10	49	-
SP1-9	25-Jun-20	Eurofins	728529	Fill	2.1	210	< 2	< 10	< 0.4	27	-	21	21	5.1	460	< 0.1	< 5	66	< 2	< 0.2	< 10	45	-
SP1-10	25-Jun-20	Eurofins	728529	Fill	7.2	-	-	-	< 0.4	45	< 1	-	17	77	-	< 0.1	< 5	23	< 2	< 0.2	< 10	**220**	< 5

Sample Identification	TRHs: T.R.H (C6-C10)[B]	T.R.H (>C10-C16)	T.R.H (>C10-C16)[C]	T.R.H (>C16-C34)	T.R.H (>C34-C40)	BTEXN: Benzene	Toluene	Ethyl Benzene	Xylene	Naphthalene	PAHs: PAHs (Total)	Benzo-a-Pyrene	Sum of Carcinogenic PAHs (as BaP TEQ)	PHENOLS: Phenol	Pentachlorophenol	Cresols
TP13/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13/1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockpile Samples																
SP1-1	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.4
SP1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-10	< 20	< 50	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.4

Sample Identification	OCPs: DDT+DDE+DDD	Aldrin and dieldrin	Chlordane	Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Toxaphene	HERBICIDES: 2,4,5-T	2,4-D	MCPA	MCPB	Mecoprop	Picloram	Other OCPs: Atrazine	Chlorpyrifos	Bifenthrin	PCBs: PCBs (total)	OTHER: Fluoride (total, fusion)	Cation Exchange Capacity (cmolc/kg)	pH (1:5 soil:CaCl2 extract)
TP13/0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	6.8
TP13/0.5	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13/1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	120	10	5.0
TP14/0.5	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14/1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockpile Samples																							
SP1-1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	< 0.1	260	-	-
SP1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP1-10	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	< 1	-	-	-	-	-	-	-	-	-	< 0.1	230	-	-

NOTES:
[A] = NEPM HSLs (for vapour intrustion) are Non-Limiting. Therefore, Soil Health Screening Levels for Direct Contact from CRC CARE 2011 Technical Report No. 10 'Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater' are adopted
[B] = Less BTEX
[C] = Less Naphthalene
[D] = EIL is for Cr 3+
Bolded results exceed criteria;
ND means Not Detected;
n/a means Not Available or Not Applicable;
All units are in **mg/kg** unless otherwise stated;
HSLs are for SANDY soils at 0 - <1 m depth
ESLs are the LOWEST values for fine/coarse grained soils
EILs for Copper, Chromium, Nickel and Zinc are for aged contaminants, calculated using the NEPM EIL calculators using the following parameters:

-Traffic Volume:	Low	
-Clay Content (%):	1	(Conservative value in the absence of clay content analysis)
-CEC (cmolc/kg):	9.8	(Average of recorded CEC values)
-pH (CaCl2):	4.82	(Average of recorded pH values)

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Table 2.1 QA/QC - Equipment Decontamination, Field & Trip Samples

Date Sampled	Laboratory	Laboratory Report No.	Sample Name	Arsenic (As)	Beryllium (Be)	Cadmium (Cd)	Total Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Tin (Sn)	Zinc (Zn)	TRH (C6-C9)	TRH (C10-C14)	TRH (C15-C28)	TRH (C29-C36)	Benzene	Toluene	Ethylbenzene	Xylenes	PAHs (Total)	Benzo (a) Pyrene
24-Jun-20	Eurofins	728529	**TRIP-240620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-Jun-20	Eurofins	728529	**TRIP-250620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26-Jun-20	Eurofins	728529	**TRIP-260620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Jun-20	Eurofins	728529	**FIELD-240620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-Jun-20	Eurofins	728529	**FIELD-250620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26-Jun-20	Eurofins	728529	**FIELD-260620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Jun-20	Eurofins	728529	**DECON-240620**	< 0.001	< 0.001	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.005	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	-	-	-	-	-	-	-	-	-	-
25-Jun-20	Eurofins	728529	**DECON-250620**	< 0.001	< 0.001	< 0.0002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.005	< 0.001	< 0.001	< 0.005	< 0.005	< 0.005	-	-	-	-	-	-	-	-	-	-
26-Jun-20	Eurofins	728529	**DECON-260620**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES: All results in mg/L.

Table 2.2. Sample Relative Percentage Differences (RPDs)

Date Sampled	Laboratory	Laboratory Report No.	Sample Name	Arsenic (As)	Beryllium (Be)	Cadmium (Cd)	Total Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Tin (Sn)	Zinc (Zn)	T.R.H C6-C9	T.R.H C10-C14	T.R.H C15-C28	T.R.H C29-C36	Benzene	Toluene	Ethylbenzene	Xylenes	PAHs (Total)	Benzo (a) Pyrene
	Eurofins		*Limit of Reporting*	*2.0*	*2.0*	*0.4*	*5.0*	*5.0*	*5.0*	*5.0*	*0.1*	*5.0*	*5.0*	*2.0*	*0.2*	*10*	*5.0*	*20*	*20*	*50*	*50*	*0.1*	*0.1*	*0.1*	*0.2*	*0.5*	*0.5*
	ALS		*Limit of Reporting*	*5.0*	*1.0*	*1.0*	*2.0*	*2.0*	*5.0*	*5.0*	*0.1*	*2.0*	*2.0*	*5.0*	*2.0*	*5.0*	*5.0*	*20*	*50*	*100*	*100*	*0.2*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*
24-Jun-20	Eurofins	728529	**BH06/0.1**	2.3	< 2	< 0.4	25	5.8	7.5	12	< 0.1	< 5	11	< 2	< 0.2	< 10	45	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-240620A**	5.2	< 2	< 0.4	25	< 5	5.5	10	< 0.1	< 5	8.3	< 2	< 0.2	< 10	37	< 10	< 50	< 100	< 100	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Relative Percent Difference:			**77.3**	0*	0*	0.0	**79.5**	30.8	18.2	0*	0*	28.0	0*	0*	0*	19.5	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	Eurofins	728529	**BH08/0.1**	4.1	< 2	< 0.4	19	< 5	7.7	17	< 0.1	< 5	6.4	< 2	< 0.2	< 10	40	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-240620B**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Relative Percent Difference:			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-Jun-20	Eurofins	728529	**BH20/0.1**	51	50	6.7	79	60	64	92	1.4	55	63	47	6.6	56	120	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-250620**	10	< 2	< 0.4	32	6.3	8.6	32	< 0.1	< 5	9.4	< 2	< 0.2	< 10	44	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	RPD			**134.4**	**192.2**	**188.4**	**84.7**	**162.0**	**152.6**	**96.8**	**186.2**	**182.6**	**148.1**	**191.7**	**194.0**	**167.2**	**92.7**	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
26-Jun-20	Eurofins	728529	**TP03/0.1**	2.9	< 2	< 0.4	37	11	11	17	< 0.1	< 5	22	< 2	< 0.2	< 10	26	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-260620A**	15.0	< 2	< 0.4	61	13	12	26	< 0.1	< 5	24	< 2	< 0.2	< 10	27	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Relative Percent Difference:			**135.2**	0*	0*	49.0	16.7	8.7	41.9	0*	0*	8.7	0*	0*	0*	3.8	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	Eurofins	728529	**TP07/0.1**	< 2	< 2	< 0.4	20	5.0	5.9	12	< 0.1	< 5	7.4	< 2	< 0.2	< 10	9.4	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-260620B**	< 2	< 2	< 0.4	20	< 5	5.0	10	< 0.1	< 5	6.7	< 2	< 0.2	< 10	7.3	-	-	-	-	-	-	-	-	-	-
	Relative Percent Difference:			0*	0*	0*	0.0	**66.7**	16.5	18.2	0*	0*	9.9	0*	0*	0*	25.1	-	-	-	-	-	-	-	-	-	-
	Eurofins	728529	**TP10/0.1**	< 2	< 2	< 0.4	32	6.6	5.5	11	< 0.1	< 5	11	< 2	< 0.2	< 10	13	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	Eurofins	728529	**DUP-260620C**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Relative Percent Difference:			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Jun-20	Eurofins	728529	**BH06/0.1**	2.3	< 2	< 0.4	25	5.8	7.5	12	< 0.1	< 5	11	< 2	< 0.2	< 10	45	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-240620A**	<5	<1	<1	20	5.0	6.0	8.0	<0.1	<2	10	<5	<2	<5	42	< 10	< 50	< 100	< 100	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Relative Percent Difference:			**8.3**	0*	0*	22.2	14.8	22.2	40.0	0*	0*	9.5	0*	0*	0*	6.9	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
	Eurofins	728529	**BH08/0.1**	4.1	< 2	< 0.4	19	< 5	7.7	17	< 0.1	< 5	6.4	< 2	< 0.2	< 10	40	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-240620B**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	Relative Percent Difference:			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25-Jun-20	Eurofins	728529	**BH20/0.1**	51	50	6.7	79	60	64	92	1.4	55	63	47	6.6	56	120	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-250620**	<5	<1	<1	21	5.0	8.0	30	<0.1	<2	8.0	<5	<2	<5	46	< 10	< 50	< 100	< 100	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Relative Percent Difference:			**181.3**	**196.0**	**172.2**	**116.0**	**169.2**	**155.6**	**101.6**	**186.2**	**192.9**	**154.9**	**179.8**	**147.4**	**182.9**	**89.2**	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
26-Jun-20	Eurofins	728529	**TP03/0.1**	2.9	< 2	< 0.4	37	11	11	17	< 0.1	< 5	22	< 2	< 0.2	< 10	26	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-260620A**	<5	<1	<1	35	10	11	18	<0.1	<2	20	<5	<2	<5	23									-	-
	Relative Percent Difference:			**14.8**	0*	0*	5.6	9.5	0.0	5.7	0*	0*	9.5	0*	0*	0*	12.2	-	-	-	-	-	-	-	-	-	-
	Eurofins	728529	**TP07/0.1**	< 2	< 2	< 0.4	20	5	5.9	12	< 0.1	< 5	7.4	< 2	< 0.2	< 10	9.4	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-260620B**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Relative Percent Difference:			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Eurofins	728529	**TP10/0.1**	< 2	< 2	< 0.4	32	6.6	5.5	11	< 0.1	< 5	11	< 2	< 0.2	< 10	13	< 20	< 20	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.5	< 0.5
	ALS	EM2011157	**SPLIT-260620C**	Held at lab		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Relative Percent Difference:			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

Where one sample is non-detectable and its paired result is positive, one half the detection limit is used to calculate the RPD.

Grey shaded results exceed 50%, although are based on low results <10 x LOR or due to halving a non-detectable value to calculate the RPD

Yellow highlighted results indicate an RPD above the acceptable limit after an allowance for the effect of non-detect values and/or limits of reporting has been taken

All results in mg/kg;

* = effectively zero

APPENDIX A

Atma Environmental
PSI Report, 2019

Atma Environmental

ATF Atma Unit Trust ABN 25 256 491 913

PRELIMINARY ENVIRONMENTAL SITE INVESTIGATION:
AREA 12A & 13, CLARKEFIELD, VIC.

Prepared for:

Clarkefield Developments Pty Ltd
c/o APD Projects
Level 3, 486 St Kilda Road,
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Project Ref.: 1788 Clarkefield
Date: 7 August 2019

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Report Finalisation and Distribution

PROJECT REFERENCE: #1788 Clarkefield

REPORT TITLE: Preliminary Environmental Site Investigation: Areas 12A & 13, Clarkefield, Vic.

DATE: 7th August 2019

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EXECUTIVE SUMMARY

Atma Environmental Pty Ltd was engaged to undertake a preliminary environmental site investigation (PSI) for Areas 12A and 13 in Clarkefield, Victoria. The 'Site' covers a total area of 278 ha approximately and is located within the Macedon Ranges Shire council area. It is understood that Clarkefield Developments Pty Ltd intend to develop the site for future residential and other possible purposes. The site is presently zoned a combination of 'Farming' (FZ), Township (TZ) and Rural Living (RLZ).

The objective of the PSI was to assess the potential contamination status of the site with respect to the proposed future residential land use and to gain an understanding of what significant contamination risks may exist. The scope of work completed for the assessment included:

- A site-specific environmental/historical review and an environmental inspection to determine the nature of the past land uses and determine if further contamination assessment or a management strategy may be required; and
- Provision of a preliminary environmental site assessment report.

The records review indicated that the site is located on Newer Volcanics geology with regional groundwater in the range for Segments 'A2' to 'C' and anticipated to be flowing in a south-westerly direction, towards Jacksons Creek. Groundwater depth is anticipated to be between 5-20 m below ground level (bgl), potentially deeper in the far south end of the site.

The site is not subject to an Environmental Audit Overlay, is not listed on the EPA Priority Site Register and is not in an area of known groundwater pollution. There are no recognisable sources of potentially migrating contamination near the site. A previous environmental assessment identified part of southern site as having placed filling, confirmed by this assessment as dating to c. 2012 and as being limited to the area zoned for township purposes. This review also identified a number of former dams and a suspect former house area, north of Station St.

An environmental inspection of the site determined that the use remains as agricultural, with rural residential and township in the southern portion of the site and a former railway line in the north. Numerous areas of rock stockpiles and groundwater bores have been identified in Area 12A. Observations did not suggest potential contamination of the soil (e.g. no odours or staining) in this area. No asbestos was noted in Area 12A. There are no ancillary uses, such as fuel storage, presenting a risk of localised site contamination. In the southern portion of the site, referred to as Area 13, various areas of placed filling and stockpiles have been identified on the southern corner of the property with asbestos also identified on the ground. Additionally, two former dams located south of Station St appeared to have been backfilled.

A detailed environmental assessment with soil sampling is recommended targeting former dams, former suspect and existing houses, removed structures, broad-area site filling, soil stockpiles and the extent of the asbestos find.

1 INTRODUCTION

The site under investigation is referred to as Area 12A and Area 13 at Clarkefield, Vic. and consists of a total of 278 ha of undeveloped agricultural land and township.

The land falls within the Macedon Ranges Shire council district, is zoned Farming (FZ), Township (TZ) and Rural Living (RLZ) and is earmarked for future residential and possible other purposes including a school and local parks; the development concept plan is provided in Appendix A.

Figure 1 shows the regional location of the site and Figure 2 provides site details and locations of each area.

2 OBJECTIVES AND SCOPE OF ASSESSMENT

Clarkefield Developments Pty Ltd requested this preliminary environmental site investigation (PSI) to inform them about potential for contamination to exist onsite and to identify what further investigation may be required prior to sensitive land use.

The objective of the PSI was therefore to provide an initial assessment of the potential for site contamination to exist, to gain an understanding of what significant contamination risks may exist, and to provide a framework for any further environmental investigation that may be required.

Atma Environmental was commissioned for this investigation in accordance with our fee proposal dated 15 June 2019 (ref #Q19-3261). As per the fee proposal, the scope of work was limited to a desktop review and an environmental site inspection and included:

- Documentation of the site history information gathered, including review of historical aerial photos, certificates of land title, geology, hydrogeology, standard environmental and historical records review, and other desktop information;
- Site reconnaissance visit by a qualified environmental specialist; and
- Preparation of this PSI report on the findings.

3 SITE IDENTIFICATION AND REGIONAL SETTING

The site is situated in the area of Clarkefield, approximately 60 km north of Melbourne's central business district (refer to Figure 1). Details relating to the sites formal identification and regional setting are outlined in Table A.

Table A. Site Setting

Site Address	Area 12A and Area 13, Clarkefield, Vic
Size of Site	278 ha (approx.)
Lot/Plan No.	Area 12A: Lot 1 on PS415315 Area 13: Lot 1 on TP914006 Lot 1 on TP330358 Lot 1 on PS442971 Lot 2 on PS442971 Lot 2 on LP219482
Last Certificate of Title	Volume 8466 Folio 275 (Area 12A)
Local Government	Macedon Ranges Shire Council
Planning Zone on Site	Farming (FZ), Township (TZ) and Rural Living (RLZ)
Planning Overlays on Site	Development Planning Overlay DPO10 (in part)
Aboriginal Cultural Heritage Sensitivity?	Areas adjacent Bolinda Creek
Current Site Use & Features	The northern part of the site is currently used for farming and cropping. It contains cropping fields, scattered trees, tree lines, two dams, several water bores and livestock troughs. A historic railway embankment and cutting runs N-S through the northern part of site. In the southern portion of the site a house and shed/garage fronts onto the Melbourne-Lancefield Rd. A third extant dam and former structures lie west of the house.
Adjacent Land Uses	The township area includes numerous houses and vacant lots, a train station, a CFA depot and historic bluestone hotel.

The Planning Property Report (showing the surrounding land use zoning) is provided in Appendix A. Refer to Figure 2 for site details.

3.1 Topography

The upper and lower part of the site lie at approximately 340 and 300 m above sea level respectively, with a regional slope towards the south, generally flat in profile.

Regionally, the topography is flat to undulating with a regional slope to the south-west, towards the deeply incised Jacksons Creek. Refer to Appendix B for the topography/surface water features.

3.2 Surface Water Receptors

Department of Environment, Land, Water and Planning (DELWP) mapping shows Riddells Creek and Jacksons Creek running north-west to south-west off-site, while Bolinda Creek is noted flowing west-east near the northern part of the site. There are no surface water receptors

mapped on-site. Refer to Appendix B for a map of nearby surface water receptors.

3.3 Local and Regional Geology

According to the *Visualising Victoria's Groundwater* (VVG) website (Federation University, 2018), the site is entirely located on the Newer Volcanics Formation, generally consisting of alkali and tholeiitic basalt flows. For full details refer to Appendix B.

3.4 Regional Hydrogeology and Groundwater Bore Search

The *Visualising Victoria's Groundwater* (VVG) website (Federation University, 2018), maps the depth to groundwater as mainly being a range of 5-20 m below ground level (bgl) with shallower groundwater expected in the central part of Area 12A and deeper groundwater (potentially >20 m) in Area 13. Refer to Appendix B for the groundwater depth mapping.

According to the VVG website, the groundwater salinity is expected to be between 1,000 and 3,500 mg/l Total Dissolved Solids (TDS) which is defined by the *State Environment Protection Policy (Water)* as Segments A2, B and C. Refer to Appendix B for the groundwater salinity map.

Conservatively, assuming that 'Segment A2' is relevant at the site, the following beneficial uses of groundwater are protected under the *State Environment Protection Policy (Water)*:

- Water dependent ecosystems and species
- Potable water supply (acceptable)
- Potable mineral water supply
- Agriculture and irrigation (irrigation)
- Agriculture and irrigation (stock watering)
- Industrial and commercial
- Water-based recreation (primary contact recreation)
- Traditional Owner cultural values
- Cultural and spiritual values
- Buildings and structures
- Geothermal properties

A search of the VVG database identified four registered groundwater bores (IDs 70057, 70043, 70040 and 319775) that may have existed on the southern portion of the site. There are numerous registered groundwater bores along Station St indicating that beneficial uses of groundwater are being realised. The only available bore depths are noted to be at 46 m and 80 m below ground level. No other information is available.

Refer to Appendix B for a location map and details of the surrounding registered bores. Information regarding chemistry and lithological details are available for some of these bores.

Based on surrounding topography and proximity of the hydrologic receptors, regional groundwater is expected to flow to the south-west towards Jacksons Creek.

4 RECORDS REVIEW

4.1 Previous Reports

Atma Environmental, "*Preliminary Environmental Advice – Clarkefield Township Zone, Clarkefield, Vic.*" 1 Nov. 2017 [Ref. 1581]

Atma Environmental was previously engaged to complete a limited preliminary environmental assessment at Clarkefield of the land zoned as Township, located on the north and south sides of Station St, Clarkefield. The land assessed in 2017 comprises part of the land currently under investigation. Past uses were confirmed as being limited to farming purposes only. The report identified filling in the section south of Station St and in a dam north of Station St, presenting a low to moderate risk of introduced contamination.

Further site investigation with soil sampling was recommended to confirm the quality of the suspected site fill.

4.2 Environmental Record Sources

To assess the likelihood of contaminants or hazardous substances that may have migrated to the site, some records reviewed pertain not only to the site itself, but also to properties within a 1 km radius. The following sources were reviewed in conducting this site assessment:

List of Issued Certificates and Statements of Environmental Audit (Victoria EPA)

Certificates and Statements of Environmental Audit are statutory documents that are issued after a statutory environmental audit of a property has been conducted. A Certificate of Environmental Audit is issued for property where, following an audit, an environmental auditor believes the environmental condition of the land to be suitable for any beneficial use. A Statement of Environmental Audit is issued where, following an audit, an environmental auditor believes the land is not suitable for all possible beneficial uses, but is suitable for specific uses or developments; it may contain conditions of clean-up or management of contamination.

The EPA online database shows that no certificates or statements of environmental audit have been issued for the site, or for sites within one kilometre (refer to Appendix B).

EPA Priority Sites Register

The Priority Sites Register lists sites for which the EPA has issued a Clean-Up Notice (CUN) or a Pollution Abatement Notice (PAN) pursuant to sections of the *Environment Protection Act 1970*. The condition of these sites is not compatible with the current or approved use of the site without active management to reduce the risk to human health and the environment. Such management can include clean-up, monitoring and/or institutional controls.

A CUN aims to prevent further contamination and impact on beneficial uses through removal of waste, undertaking clean-up activities, on-going management of pollution or altered handling, storage or location of industrial or prescribed industrial waste from a site.

A PAN aims to prevent further occurrence of pollution or potential environmental risk through the design and compliance of risk controls and changes to on-site processes and practices.

The Priority Sites Register (which was last updated on 30 June 2019) **does not** list any notices issued 1 km from the site or at the site itself (refer to Appendix B).

EPA Closed Landfills and Post Closure Pollution Abatement Notices (PC PANs)

Following closure, landfills continue to pose risks to the environment. In order to ensure that the risks are appropriately quantified and managed, owners of closed landfill sites are issued with a Post Closure Pollution Abatement Notices (PC PAN) that requires the closed landfill to be managed so there are no unacceptable risks to the environment.

EPA Victoria maintains a database for locating issued PC PAN documents. As of 22nd July 2019, **no** PC PANs had been issued within 1 km of the site or at the site itself.

List of Treatment and Disposal Facilities for Prescribed Wastes

EPA Victoria maintains a Prescribed Industrial Waste (PIW) database for locating PIW treaters, disposers and permitted transporters. As of 22nd July 2019, **no** licensed waste transporter was found at Area 12A and 13, Clarkefield (permitted to transport asbestos (all forms)). Being a transporter, this record does not suggest a potential off site source.

Licences and Approvals (to discharge, handle, treat or dispose of waste to the environment)

An EPA license contains standard conditions that aim to control the operation of premises so that there is no adverse effect on the environment. A licence may be held by a person, a company, a statutory corporation or a municipal council. As of 22nd July 2019, **no** EPA licenses were found within one kilometre of the site.

Victorian Landfill Register

Publicly available to all Victorians, the Victorian Landfill Register (VLR) draws information from various sources. It lists all current and known closed landfills in Victoria. Information contained in the VLR is intended to be used only as a guide and is not to be relied upon as being either complete or accurate. The VLR brings together information from:

- EPA landfill licences and post closure pollution abatement notices;
- Regional Waste and Resource Recovery Implementation Plans; and

- Historic landfill records held by EPA.

Where sites fall within a 500 m buffer of existing or former landfill there may be implications for planning or additional assessment for potential ground gas risks, such as methane. The VLR interactive web page was queried 22nd July 2019 and it was confirmed that there are **no** listed landfills or former landfills within 500 m of the site.

Groundwater Quality Restricted Use Zones

A 'groundwater quality restricted use zone' (GQRUZ) is an area where there has been historic groundwater pollution as a result of previous industrial activity. These zones have been subject to clean-up in line with relevant environmental standards, however, restrictions remain on what the water may be used for (if a bore is used to extract it). The site or surrounding land (within 1 km) is **not** within an area subject to a GQRUZ (refer to Appendix B).

4.3 Historical Information Sources

Aerial Photographs

Aerial photographs of the site and surrounding area, dating from between 1968 and 2019 were reviewed. Refer to Appendix C for the aerial photographs and to Table B for details.

Table B. Aerial Photograph Review

Date	Notes
1968-1969	**Site:** Land is observed as undeveloped farmland with the existing house and associated sheds (now removed) on Area 13 visible. Near the main road and Station St what may be a former homestead is noted. A historic train line is observed running through the site. A hay shed (?) is visible in the far north-west site corner. Five dams are noted on-site. **Surrounding Area:** Residential houses and hotel are noted to near Station St.
1971	**Site:** Land remains undeveloped farmland. Tracks criss-cross the site. In the far south end some small sheds appear to have been removed and a garage constructed. Inferred uses: grazing and farming. **Surrounding Area:** No changes observed.
1984	**Site (partial coverage only):** The site remains as cropped agricultural land with a former railway line. Several water tank and troughs are observed. **Surrounding Area:** No significant changes observed.

2012	**Site:** Land remains used for agriculture purposes with large uncultivated rocky areas. Two dams are noted south of Station St and four north of Station St. The railway embankment remains, as do numerous water tanks and troughs. In the southern corner, out-buildings near the house have been removed. There are numerous long animal yards with shelters close to the house with a row of soil stockpiles present north of these yards. Wood and rock piles are identified to the north and west of the site. **Surrounding Area:** A sewage treatment plant and a wetland are observed on the north-west part of the site. Development of the Clarkefield Township has included new houses, CFA depot and a recreation reserve. Other surrounding land use is still used as farming and cropping.
2015	**Site:** Aerial photos for the period 2012-2015 indicate that significant civil works were occurring on the land south of Station St including filling of a small dam east of the CFA and the area generally. By 2015 this part of the site is used for hay cropping (imaged) with an open drain-line thru it. Another dam just north of Station St and next dam to north has also been infilled. In the southern corner the residential property and garage is visible along with a large former building slab. **Surrounding Area:** No observed changes are noted.
2019	**Site:** No significant changes are noted. **Surrounding Area:** No significant changes are observed since 2015.

Historical aerial photographs indicate that the site has been used for agricultural purposes, a dwelling and a railway line since at least 1968. The 1968 dwelling (in Area 13) and railway line (in Area 12A), both remain. A second *historical* home area, located north of Station St near the main road (in Area 12A), is suspected from the earliest aerial photos. No trace of this location remains.

Significant civil works within the area zoned township zone are apparent from about 2012. This resulted in the filling of several dams north and south of Station St and broad-area site filling south of Station St. Land use around the existing house (south corner, rural living zone) appears to have included animal keeping with numerous buildings removed over time. A row of soil stockpiles (pre-dating 2010) is identified north of the house.

No landfills or quarries are evident in the surrounding area from the aerial review.

Land Titles, Certificates and Records

The current and historical title ownership of the site excluding the township has been reviewed and the findings are summarised on Table B below. Refer to Appendix C for copies of the current certificate of land title.

Table C. Land Title Review

Certificate of Title	Date	Proprietor
v. 8466 / f. 275	1975	Rupert Clarke & Co. Pty Ltd *(Current Proprietors)*
	1963	Kelvin John Cardillo (*Sunbury Farmer)*

5 SITE RECONNAISSANCE

Martine Desperles of Atma Environmental conducted a site visit and inspection of the site on 25th July 2019. Observations on all parts of the site were made, although the boundary of the site was not well defined. No onsite personnel were available to be interviewed except the owner of the house located in the southern corner of the site. Refer to Appendix D for the photographs.

The following observations were made:

Area 12A:

- Land is used as agriculture and grazing;
- Most of the site was covered with crops and grass;
- Part of the western portion of the site consisted of rocky areas;
- No substances classified as 'hazardous' (including asbestos) were identified on-site and no distressed vegetation, staining, odours or evidence of spills was noted;
- Numerous areas of rock piling were identified on site, some of which containing concrete bricks;
- A historic railway embankment covered with grass was identified running through the site. The railway embankment became a cutting to the north of the site, continuing over Bolinda Creek. A portion of this cutting area was filled with stagnant water;
- Two dams were noted on-site, to the west and south of the site;
- Four water tanks, three groundwater bores and three troughs were observed in the northern and southern portion of the site; and
- Old concrete pipes were found on the northern boundary of the site.

Area 13:

- Land is used as agricultural, grazing and rural living;
- A house and a shed were noted in the southern corner of the site;
- A water tank and a septic tank were found near the house;
- A concrete slab with three drains was observed to the west of the house;
- Uncontrolled fill material of imported soil was identified at various areas, to the north, west and south of the house;
- Asbestos was identified in soil near the eastern portion of the dam;

- Soil stockpiles were observed to the north of the dam.

6 SITE CONTAMINATION POTENTIAL

6.1 Past, Current and Proposed Use of the Site

The desktop review identified Area 12A as having a long history as farming with no potential contaminating current or past land uses, or activities on any part that might pose a high risk environmental concern requiring further assessment. A former homestead area may have existed north of Station St. Several former dams (filled) are identified. The property is categorised as having a generally low contamination potential.

Past uses of Area 13 are identified as being farming, township and rural residential, with imported fill material and asbestos noted in soils surrounding the dam. The full extent of asbestos contamination is not clear, however, may be restricted to the area zoned as rural living. Two former dams located south of Station St (and more widely) the whole section zoned township has been filled. Numerous stockpiles observed in the southern corner of the site do not appear to be locally sourced. No risk of migrating contamination from nearby or surrounding sites, such as former fuel depots or landfills is identified.

Future use of the land includes a proposed residential development and other possible purposes including a school and local parks. Such uses would not be inconsistent with the low contamination potential of the land north of Station St. Further assessment of the land located south of Station St is recommended to confirm the land is suitable for residential use.

6.2 Potentially Contaminating Land Uses

Ministerial Direction No.1 *'Potentially Contaminated Land'* (1989) defines "potentially contaminated land" as land used, or known to have been used for industry, mining, or the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of the land). The site is therefore <u>not</u> defined as 'potentially contaminated' in accordance with this Direction.

The principal past and current land use is farming, township and rural residential, posing an overall low potential for site contamination. However, some ancillary uses such as filling and the site observations present a higher risk of localised site contamination and do require further assessment. Within the context of Ministerial Direction No. 1 and the known site history, an environmental audit not considered requisite.

7 CONCLUSIONS AND RECOMMENDATIONS

The records review indicated that the site is located on Newer Volcanics geology with regional groundwater in the range for Segments 'A2' to 'C' and anticipated to be flowing in a south-westerly direction, towards Jacksons Creek. Groundwater depth is anticipated to be between 5-20 m below ground level (bgl), potentially deeper in the far south end of the site.

The site is not subject to an Environmental Audit Overlay, is not listed on the EPA Priority Site Register and is not in an area of known groundwater pollution. There are no recognisable sources of potentially migrating contamination near the site. A previous environmental assessment identified part of southern site as having placed filling, confirmed by this assessment as dating to c. 2012 and as being limited to the area zoned for township purposes. This review also identified a number of former dams and a suspect former house area, north of Station St.

An environmental inspection of the site determined that the use remains as agricultural, with rural residential and township in the southern portion of the site and a former railway line in the north. Numerous areas of rock stockpiles and groundwater bores have been identified in Area 12A. Observations did not suggest potential contamination of the soil (e.g. no odours or staining) in this area. No asbestos was noted in Area 12A. There are no ancillary uses, such as fuel storage, presenting a risk of localised site contamination. In the southern portion of the site, referred to as Area 13, various areas of placed filling and stockpiles have been identified on the southern corner of the property with asbestos also identified on the ground. Additionally, two former dams located south of Station St appeared to have been backfilled.

A detailed environmental assessment with soil sampling is recommended targeting former dams, former suspect and existing houses, removed structures, broad-area site filling, soil stockpiles and the extent of the asbestos find.

8 LIMITATIONS AND EXCEPTIONS OF INVESTIGATION

The report consists of the scope of work outlined previously. This report describes the work undertaken and has been compiled for the use of Clarkefield Developments Pty Ltd only. Its conclusions are only valid for the purpose for which it was requested. This report is not an 'environmental audit' within the meaning of the *Environment Protection Amendment Act 2018* (Vic).

It is valid only when it is in original and complete form, and any person or company other than Clarkefield Developments Pty Ltd who rely on the report without specific reference to and permission from Atma Environmental Pty Ltd does so at their own risk. While every care has been taken in the compilation of this report, to the extent that its conclusions are based on the analysis of the data made available by your organisation or by a third party, no responsibility or liability is accepted for consequences arising from either errors or omissions

in that data, or from factors or data which were not made available to Atma Environmental Pty Ltd or which Atma Environmental Pty Ltd could not ascertain by reasonable inquiry in the ordinary course of its investigation, nor for any commercial decisions taken as a result of the report.

This report has not included testing of soil or groundwater for actual contamination, nor has it considered the off-site disposal classification of soils, as may be relevant where off-site disposal is required. The investigation has not specifically considered above ground issues such as lead-based paint and installed asbestos containing building products.

Environmental site investigations document property conditions at the time they are conducted. These conditions may change over time. In addition, contamination may exist at locations which have not been viewed by Atma Environmental, or which were inaccessible. The results of actual site testing and future changes in assessment guidelines, criteria or legislative requirements may alter the conclusions of this report and any recommendations flowing therefrom.

9 REFERENCES

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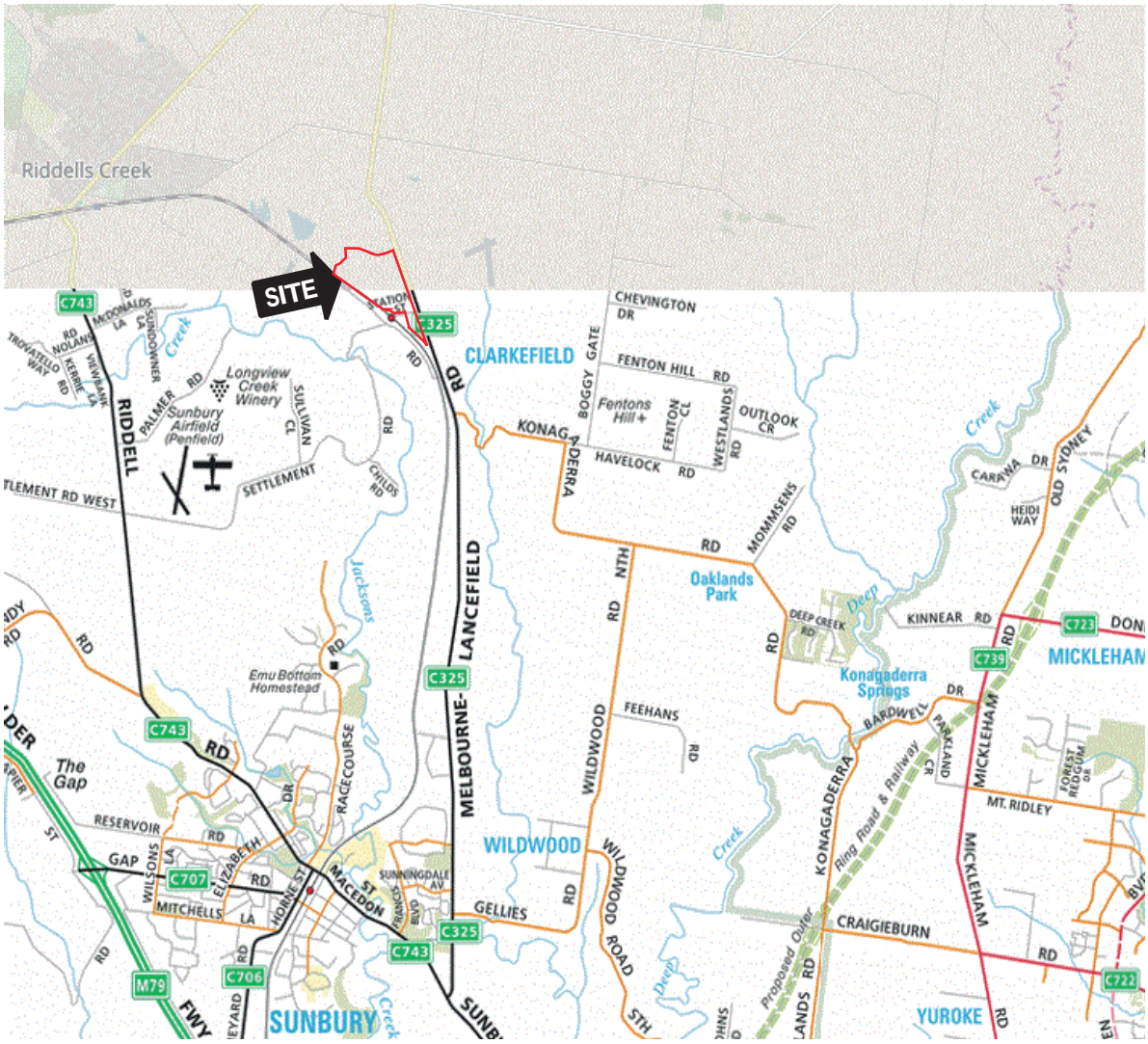
Victoria Government Gazette, "*State Environmental Protection Policy (Prevention & Management of Contamination of Land)*", No. S 95, June 2002.

Victoria Government Gazette, "*State Environmental Protection Policy (Waters)*", No. S 499, 23 Oct 2018.

Visualising Victoria's Groundwater, "*Groundwater Database Search.*" www.vvg.org.au



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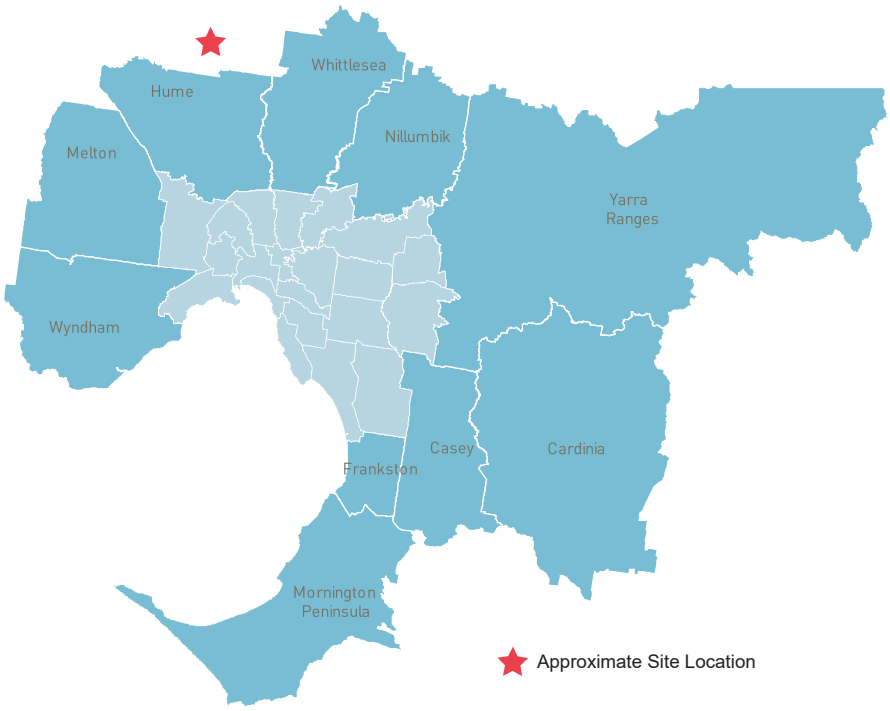
Approximate Scale:

0 1 2 4 6km

N



Atma *Environmental*

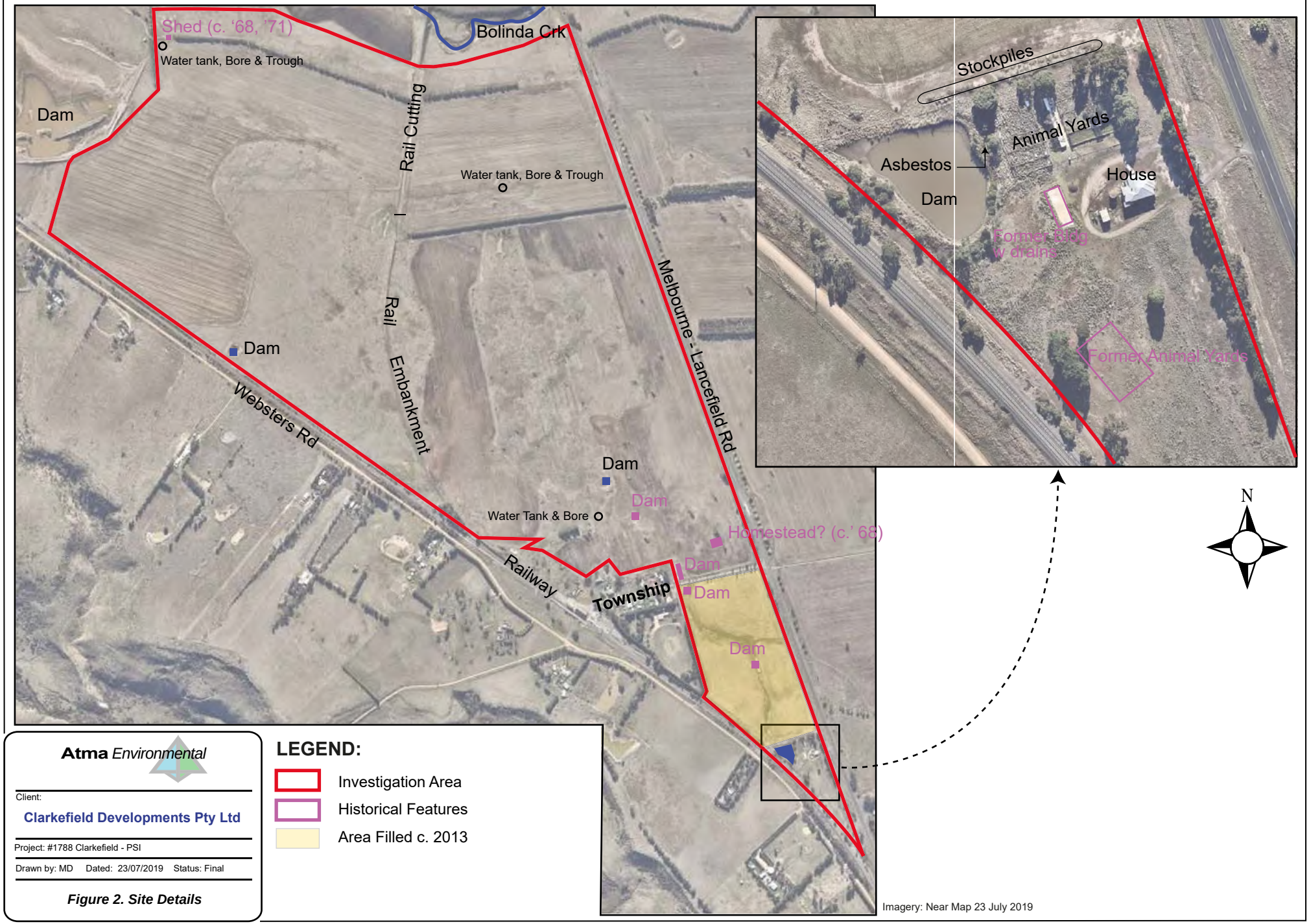
Client:

Clarkefield Developments Pty Ltd

Project: #1788 Clarkefield PSI

Drawn by: M.D Dated: 31/07/2019 Status: Final

Figure 1. Site Location



Atma *Environmental*

Client:

Clarkefield Developments Pty Ltd

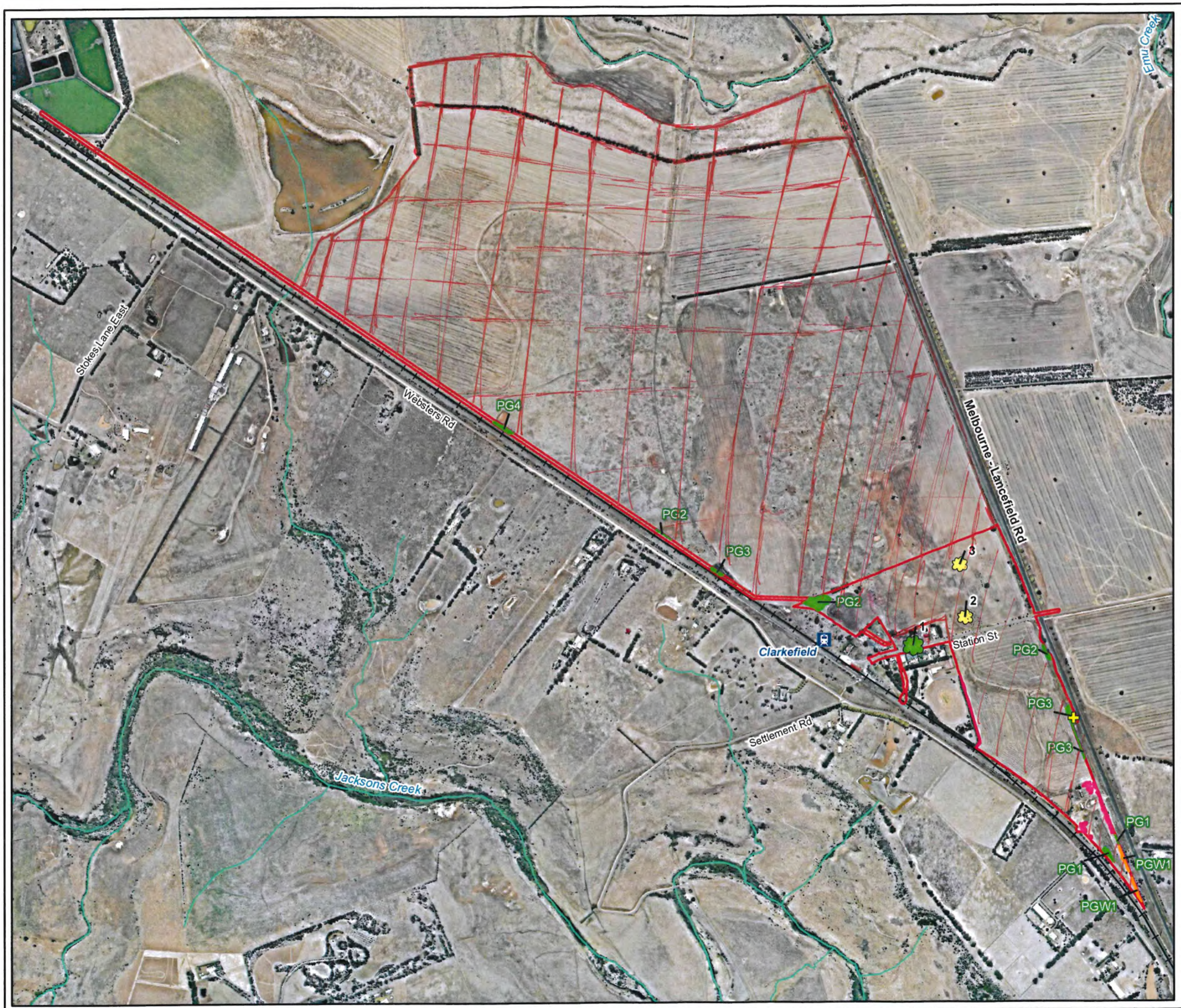
Project: #1788 Clarkefield - PSI

Drawn by: MD Dated: 23/07/2019 Status: Final

Figure 2. Site Details

APPENDIX A

Background Documents



Legend

- Study Area
- Scattered Large Tree
- Scattered Small Tree
- Other survey point

Ecological Vegetation Classes

- Plains Grassland
- Plains Grassy Woodland
- Planted

Figure 2

Ecological Features

Biodiversity Assessment, Clarkefield Township

N

0 250 500

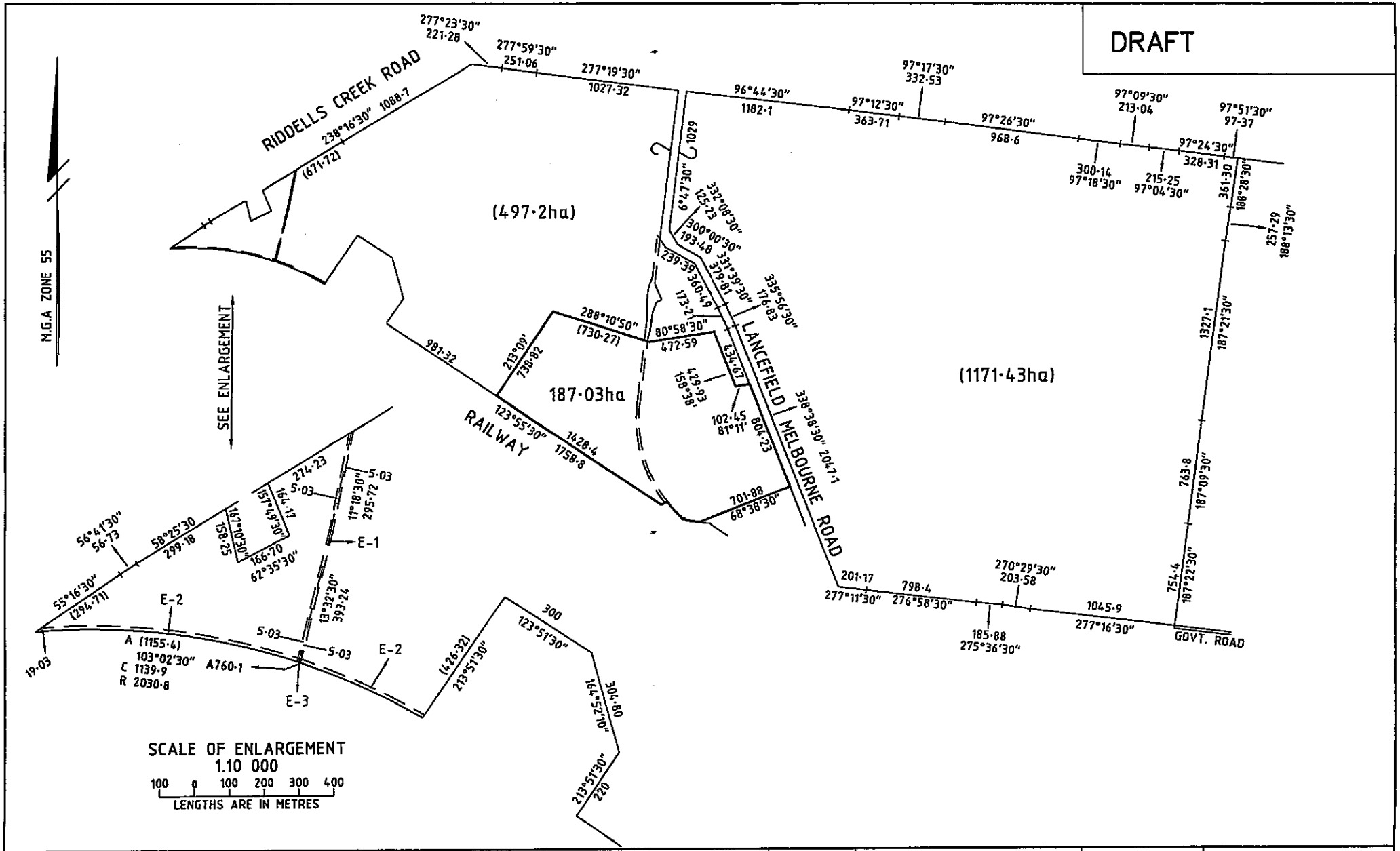
Metres

ecology & heritage partners

VicMap Data: The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

(Draft: Fig03_Ecol Feats 6/06/2018 mrdale)

Aerial source: Nearmap 2018



HIGH RIVER IRRIGATION DEVELOPMENTS PTY LTD A.C.N.109 101 777
Irrigation and licensed Surveyors
1/164 Oglivie Avenue, Echuca 3564
Postal Address: PO Box 241, Moama NSW 2731
Tel: 03 5482 2564 Fax: 03 5482 1918

PROPOSED SUBDIVISION OF LOT 1 IN PS415315L AND LOT 1 TP 219929D

SCALE	ORIGINAL SHEET SIZE: A3	SHEET 2
0 LENGTHS ARE IN METRES		
JAMES ROBERT McLAURIN VERSION 1		

PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 29 July 2019 03:56 PM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 1 PS442971**	
Address:	**1227 MELBOURNE-LANCEFIELD ROAD CLARKEFIELD 3430**	
Standard Parcel Identifier (SPI):	**1\PS442971**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1168896** (Part)	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
Directory Reference:	**VicRoads 60 E9**	

This parcel is one of 3 parcels comprising the property. For full parcel details get the free Basic Property report at Property Reports

UTILITIES

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Urban Water Corporation:	**Western Water**
Melbourne Water:	**inside drainage boundary**
Power Distributor:	**JEMENA**

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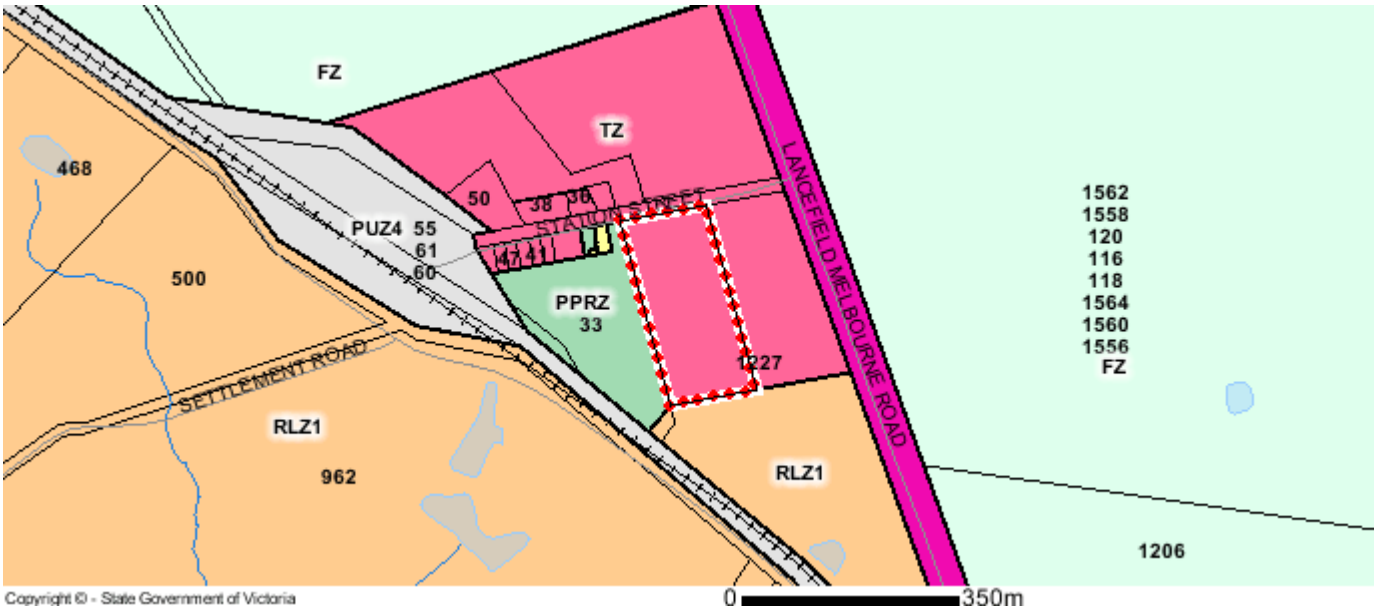
Legislative Assembly:	**MACEDON**

Planning Zones

TOWNSHIP ZONE (TZ)

SCHEDULE TO THE TOWNSHIP ZONE (TZ)



FZ - Farming	PPRZ - Public Park & Recreation	PUZ4 - Public Use - Transport
PUZ7 - Public Use - Other Public Use	RDZ1 - Road - Category 1	RLZ - Rural Living
TZ - Township		

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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PLANNING PROPERTY REPORT

Planning Overlay

DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 10 (DPO10)

DPO - Development Plan

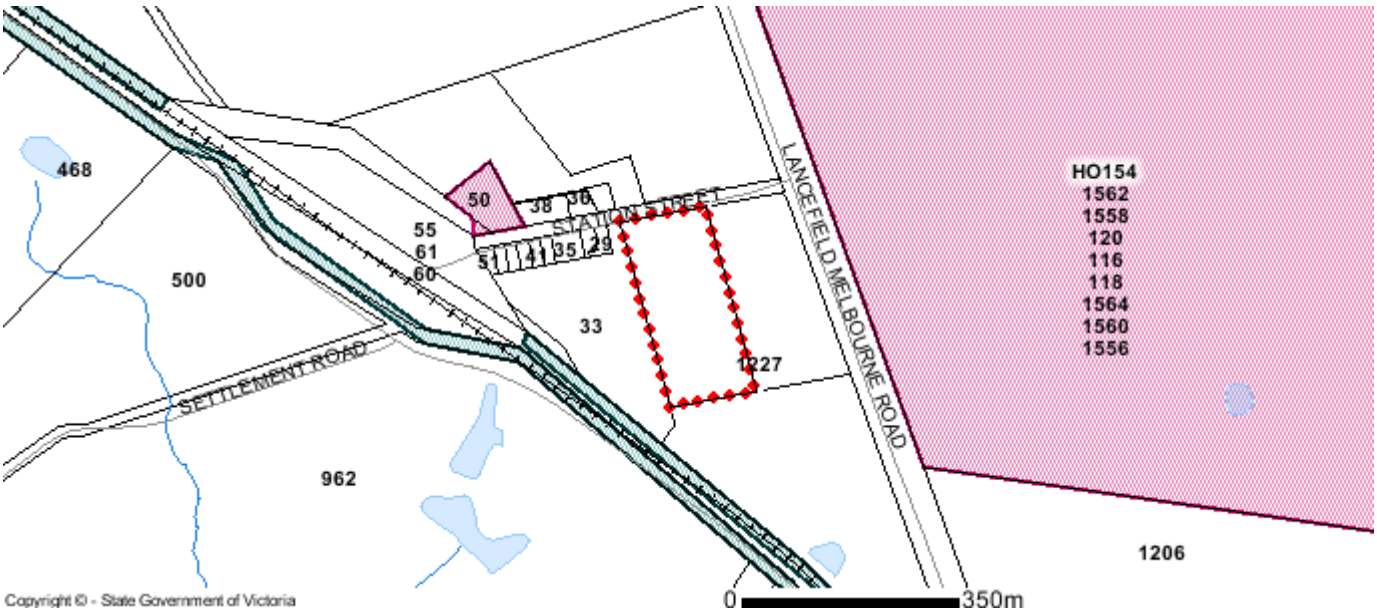
Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

HERITAGE OVERLAY (HO)

VEGETATION PROTECTION OVERLAY (VPO)



HO - Heritage **VPO - Vegetation Protection**

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Aboriginal Heritage

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Further Planning Information

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PLANNING PROPERTY REPORT

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Designated Bushfire Prone Area

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PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 29 July 2019 03:56 PM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 2 PS442971**	
Address:	**1227 MELBOURNE-LANCEFIELD ROAD CLARKEFIELD 3430**	
Standard Parcel Identifier (SPI):	**2\PS442971**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1168896** (Part)	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
Directory Reference:	**VicRoads 60 E9**	

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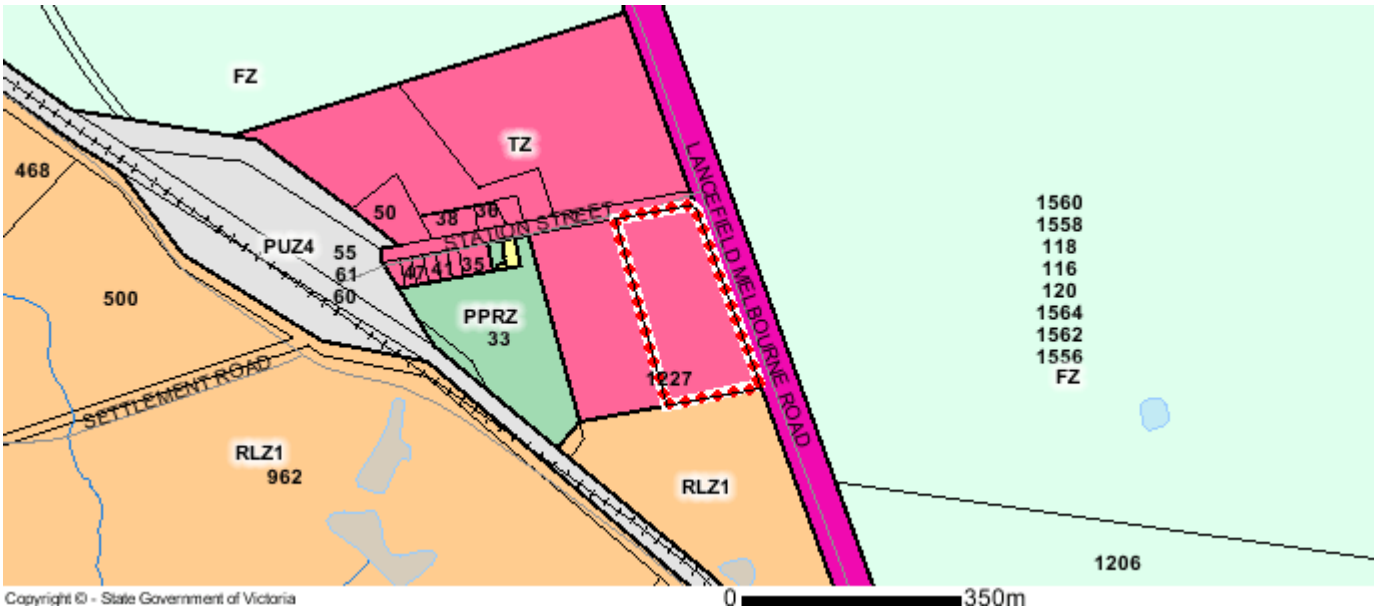
Planning Zones

TOWNSHIP ZONE (TZ)

SCHEDULE TO THE TOWNSHIP ZONE (TZ)



FZ - Farming	PPRZ - Public Park & Recreation	PUZ4 - Public Use - Transport
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DEVELOPMENT PLAN OVERLAY - SCHEDULE 10 (DPO10)

DPO - Development Plan

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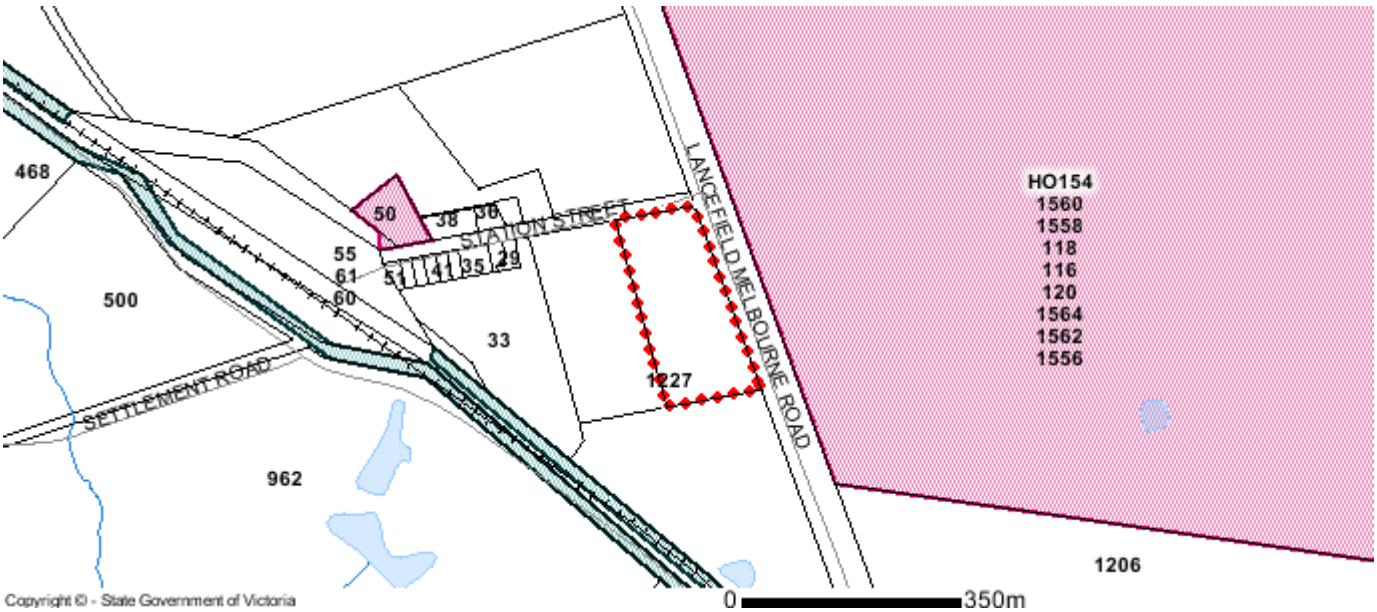

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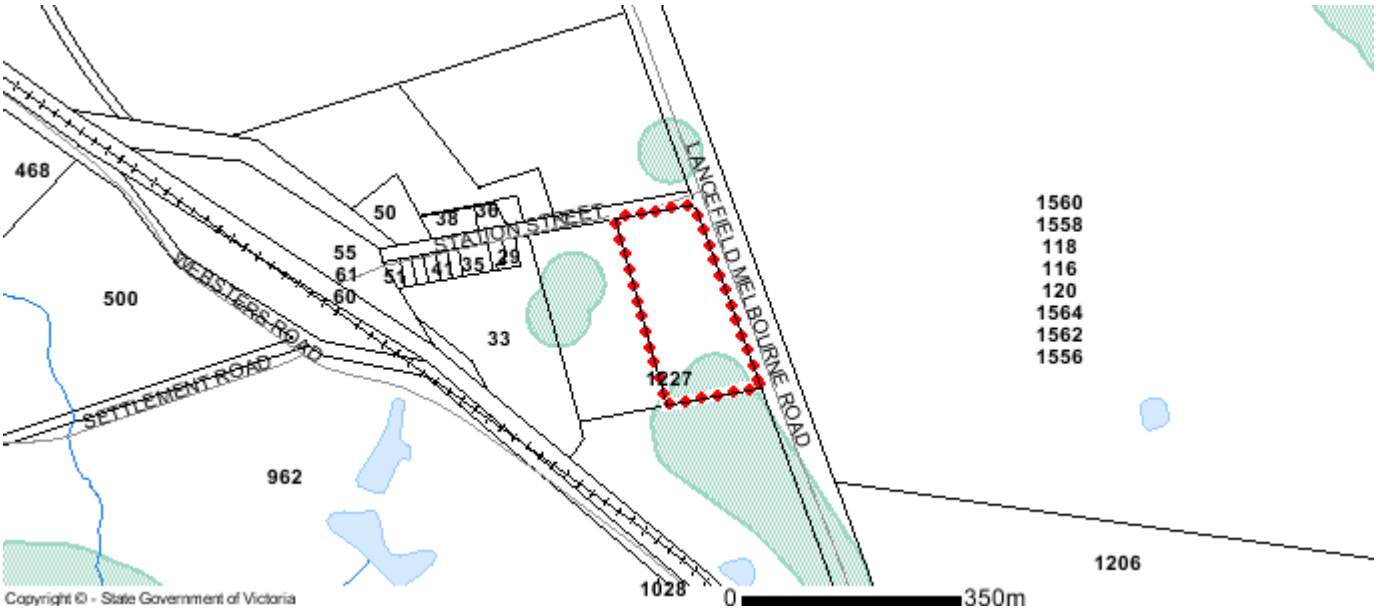

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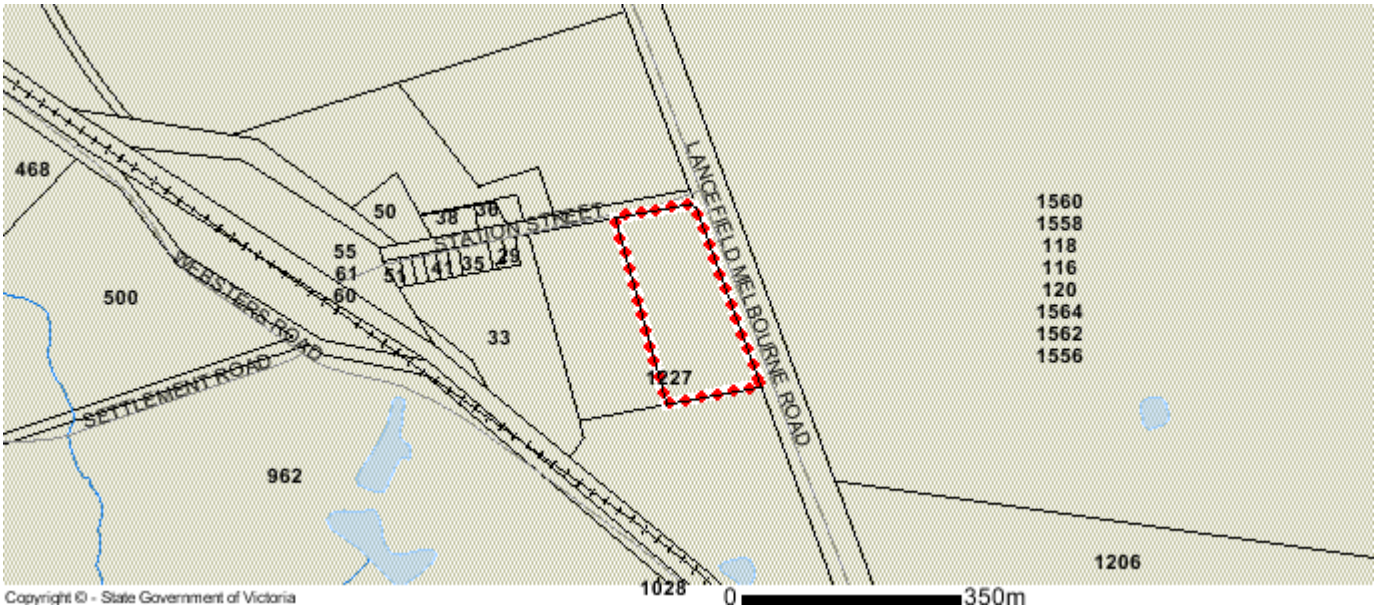

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PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 29 July 2019 03:57 PM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 1 TP330358**	
Address:	**1556 MELBOURNE-LANCEFIELD ROAD CLARKEFIELD 3430**	
Standard Parcel Identifier (SPI):	**1\TP330358**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1168901**	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
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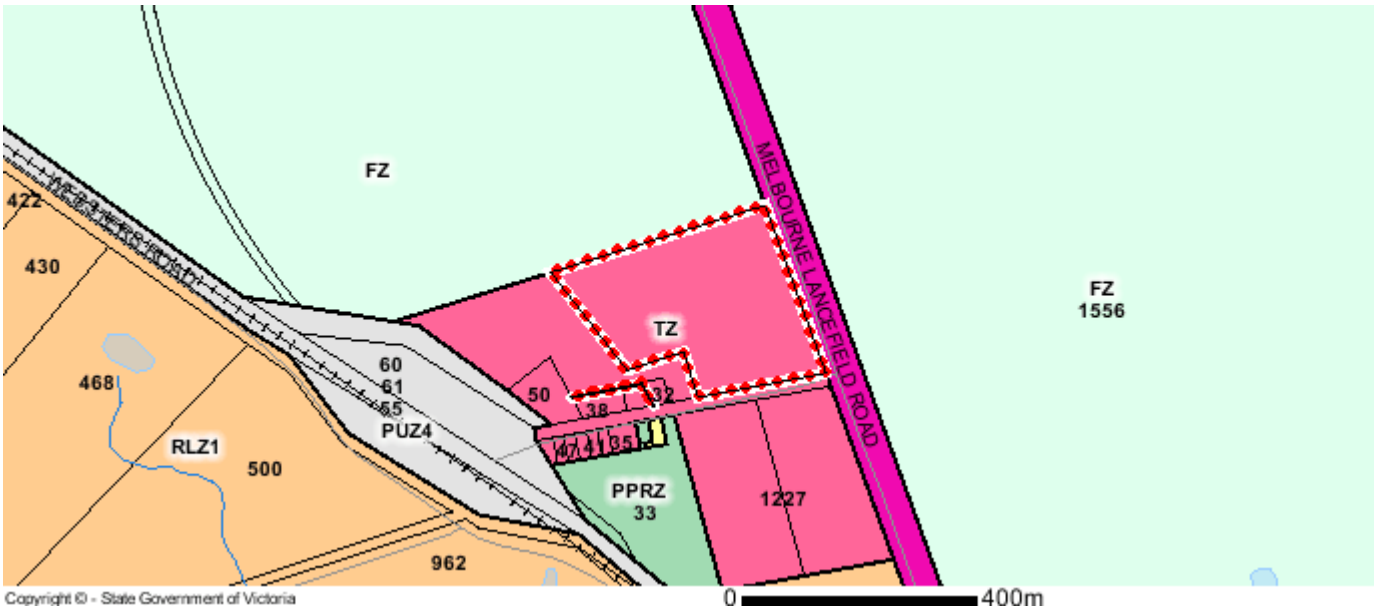

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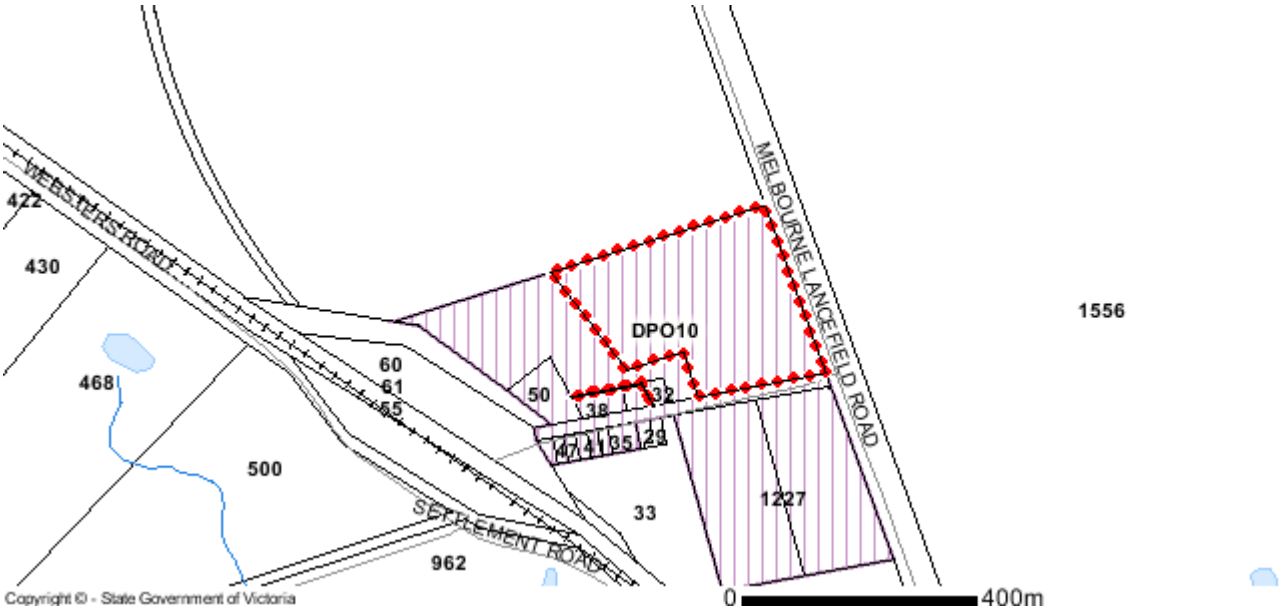

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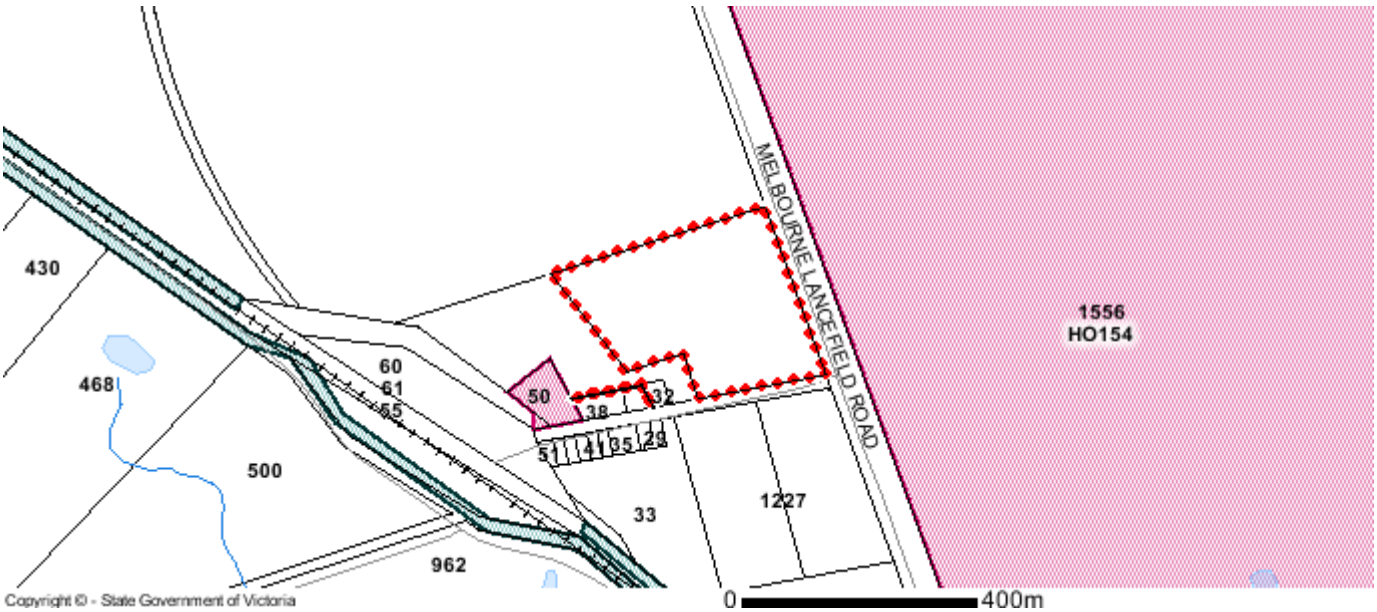

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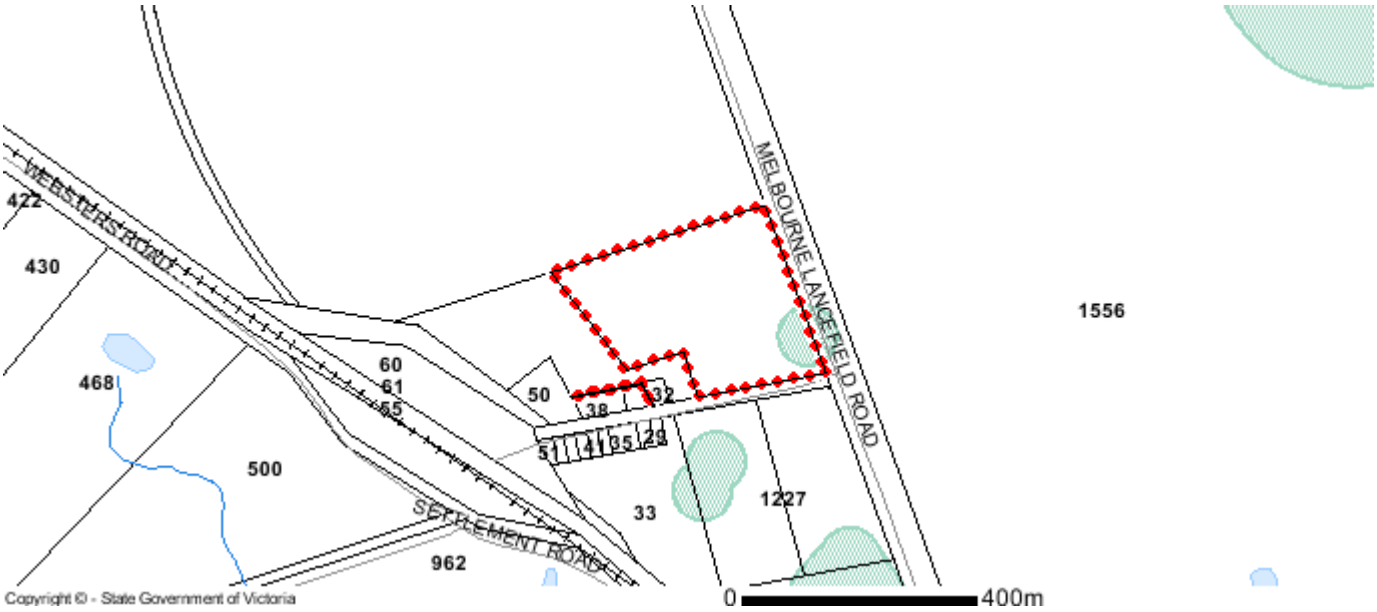

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Further Planning Information

Planning scheme data last updated on 25 July 2019.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
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PLANNING PROPERTY REPORT

Designated Bushfire Prone Area

This parcel is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Designated Bushfire Prone Area

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The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at http://mapshare.maps.vic.gov.au/vicplan or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website www.vba.vic.gov.au

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For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

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PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 29 July 2019 03:57 PM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 2 LP219482**	
Address:	**STATION STREET CLARKEFIELD 3430**	
Standard Parcel Identifier (SPI):	**2\LP219482**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1171485**	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
Directory Reference:	**VicRoads 60 D9**	

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Western Water**
Melbourne Water:	**inside drainage boundary**
Power Distributor:	**JEMENA**

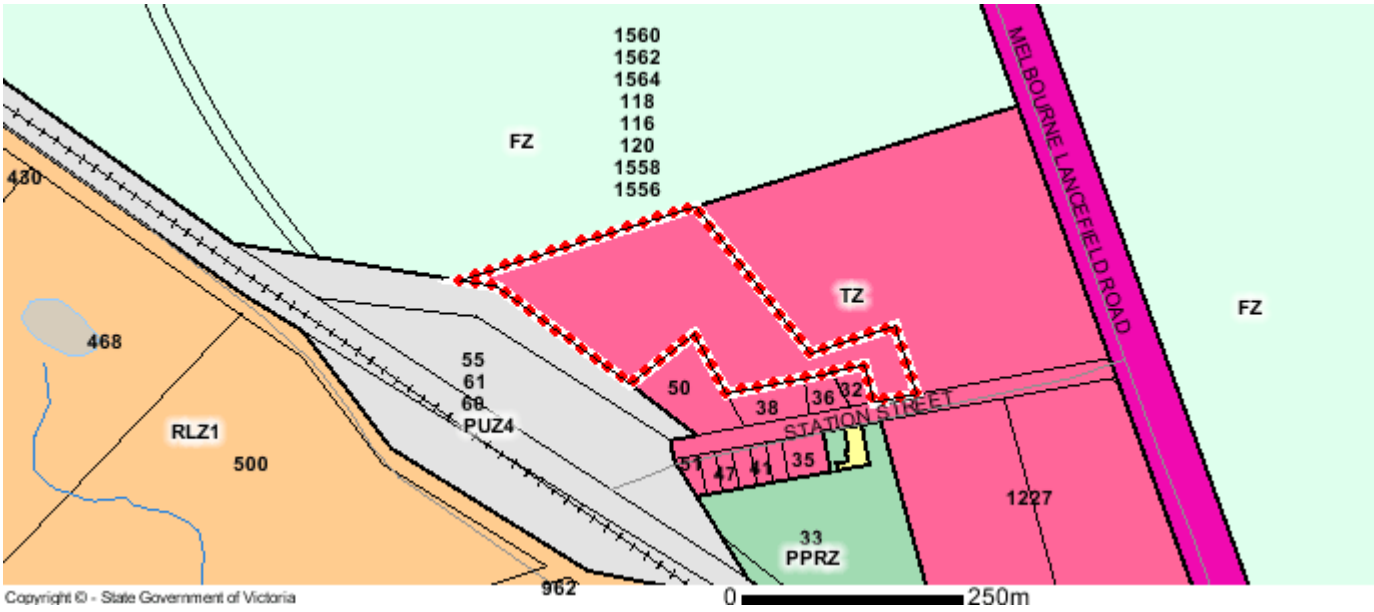
STATE ELECTORATES

Legislative Council:	**NORTHERN VICTORIA**
Legislative Assembly:	**MACEDON**

Planning Zones

TOWNSHIP ZONE (TZ)

SCHEDULE TO THE TOWNSHIP ZONE (TZ)



FZ - Farming	PPRZ - Public Park & Recreation	PUZ4 - Public Use - Transport
PUZ7 - Public Use - Other Public Use	RDZ1 - Road - Category 1	RLZ - Rural Living
TZ - Township		

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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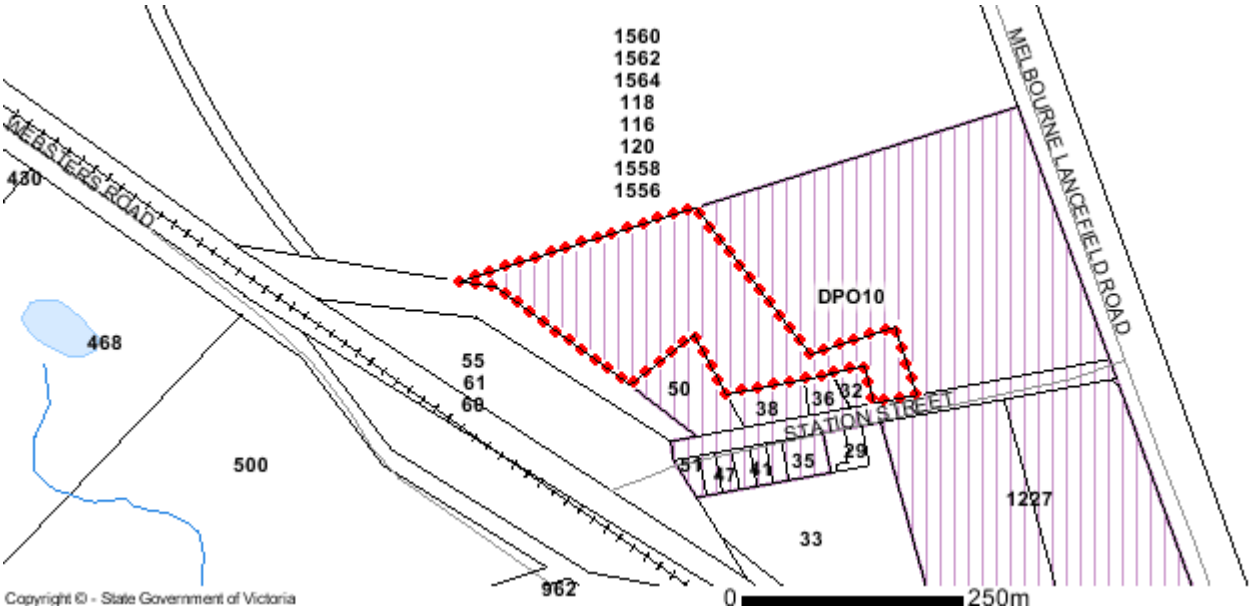
PLANNING PROPERTY REPORT

Planning Overlay

DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 10 (DPO10)



DPO - Development Plan

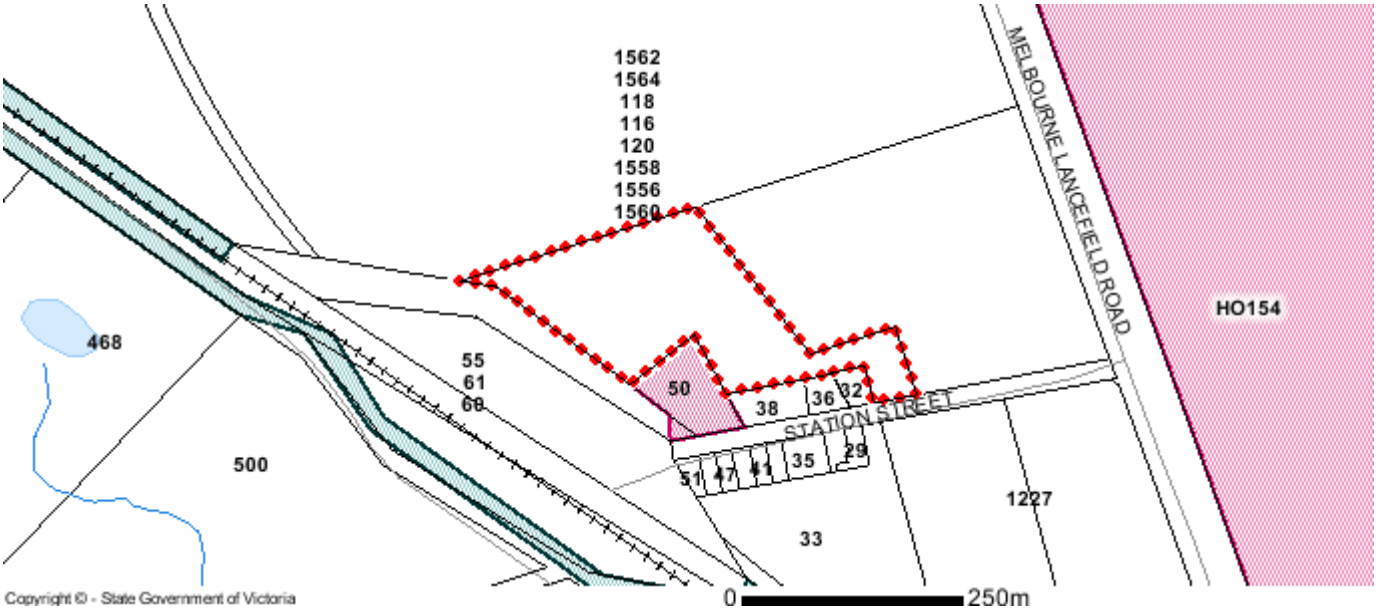
Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

HERITAGE OVERLAY (HO)

VEGETATION PROTECTION OVERLAY (VPO)



HO - Heritage **VPO - Vegetation Protection**

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Further Planning Information

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PLANNING PROPERTY REPORT

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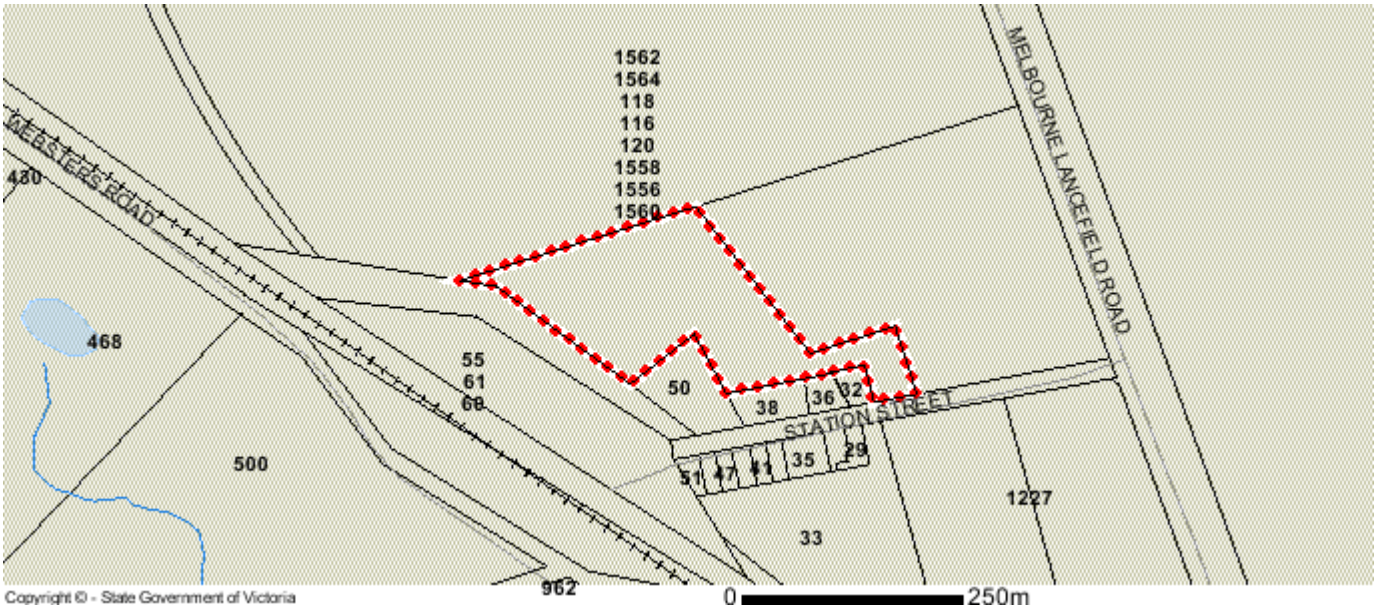

Designated Bushfire Prone Area

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Designated bushfire prone areas maps can be viewed on VicPlan at http://mapshare.maps.vic.gov.au/vicplan or at the relevant local council.

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PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 19 July 2019 11:02 AM

PROPERTY DETAILS

Address:	**116 HEATHS LANE CLARKEFIELD 3430**	
Lot and Plan Number:	**Lot 1 PS415315**	
Standard Parcel Identifier (SPI):	**1\PS415315**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1183233**	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
Directory Reference:	**VicRoads 60 D9**	

This property has 2 parcels. For full parcel details get the free Basic Property report at Property Reports

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Western Water**
Melbourne Water:	**inside drainage boundary**
Power Distributor:	**POWERCOR, JEMENA**

STATE ELECTORATES

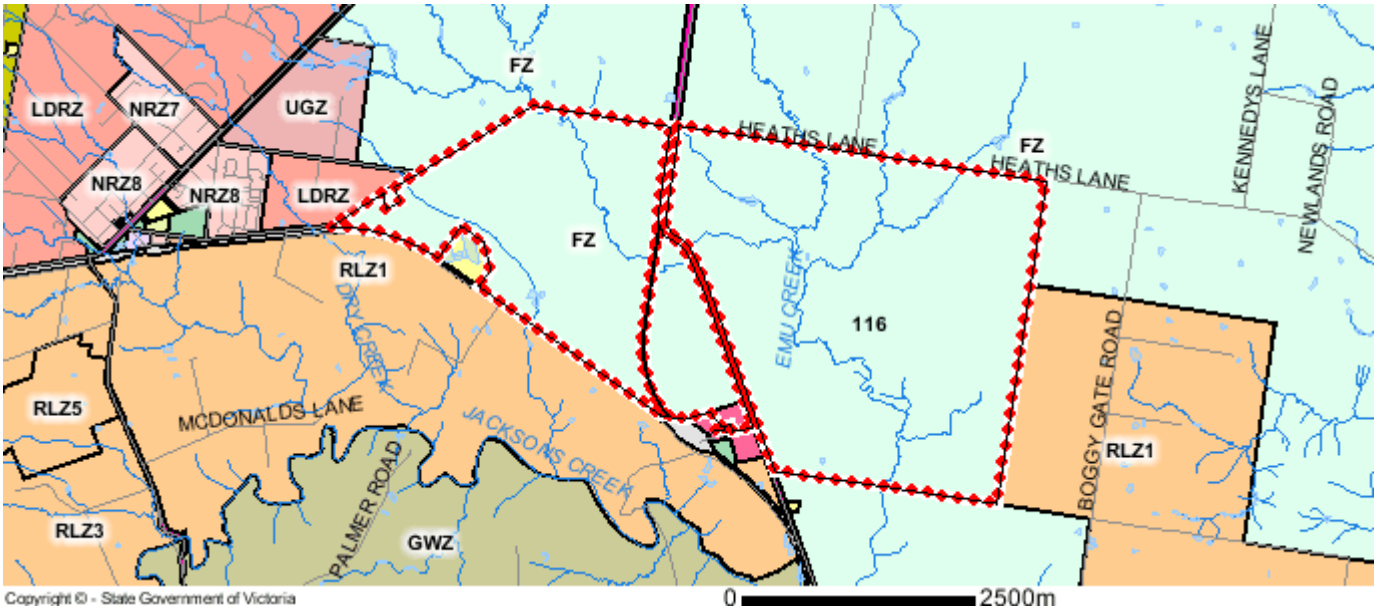
Legislative Council:	**NORTHERN VICTORIA**
Legislative Assembly:	**MACEDON**

Planning Zones

FARMING ZONE (FZ)

TOWNSHIP ZONE (TZ)

SCHEDULE TO THE TOWNSHIP ZONE (TZ)



C1Z - Commercial 1	FZ - Farming	GWZ - Green Wedge
IN1Z - Industrial 1	LDRZ - Low Density Residential	NRZ - Neighbourhood Residential
PPRZ - Public Park & Recreation	PUZ1 - Public Use - Service & Utility	PUZ2 - Public Use - Education
PUZ4 - Public Use - Transport	PUZ5 - Public Use - Cemetery / Crematorium	PUZ6 - Public Use - Local Government
PUZ7 - Public Use - Other Public Use	RCZ - Rural Conservation	RDZ1 - Road - Category 1
RDZ2 - Road - Category 2	RLZ - Rural Living	SUZ - Special Use
TZ - Township	UGZ - Urban Growth	

Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

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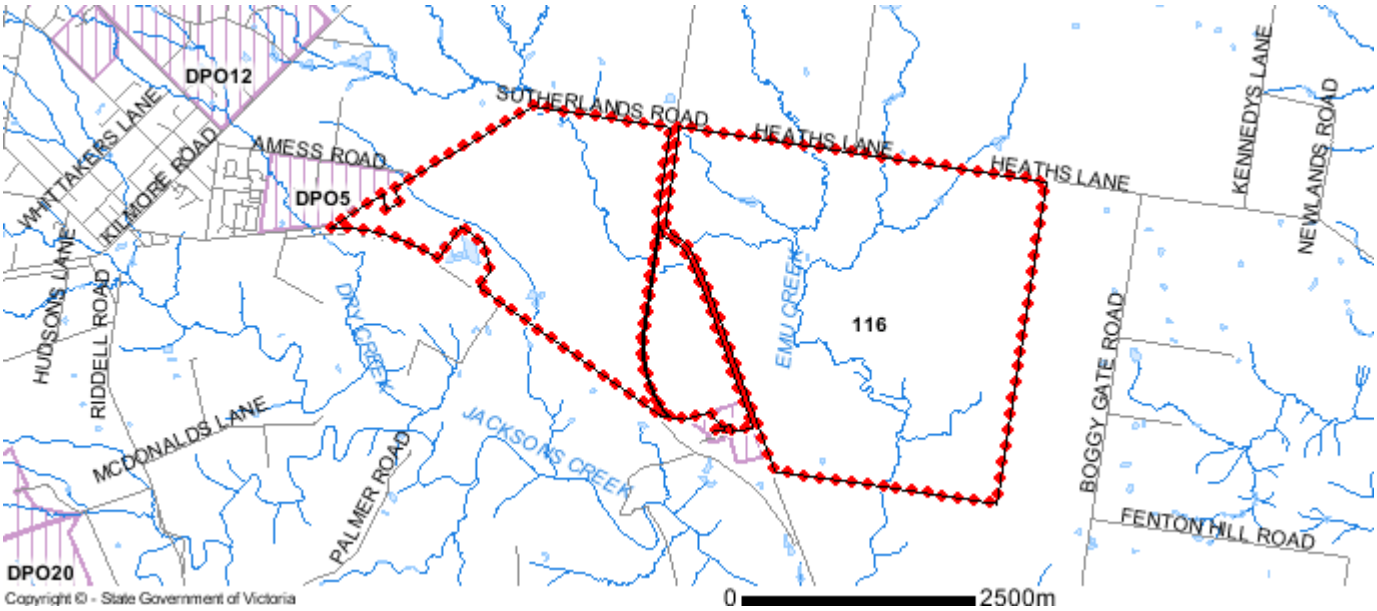
Planning Overlays

DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 10 (DPO10)

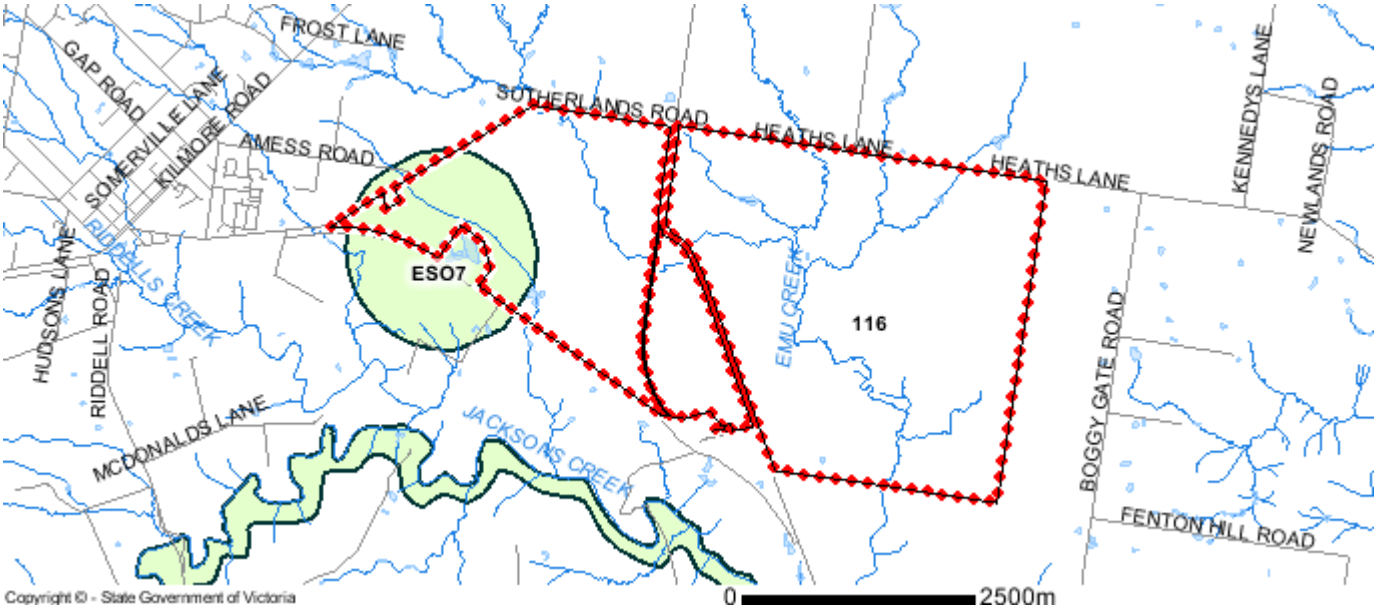


DPO - Development Plan

Note: due to overlaps, some overlays may not be visible, and some colours may not match those in the legend.

ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)

ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 7 (ESO7)



ESO - Environmental Significance

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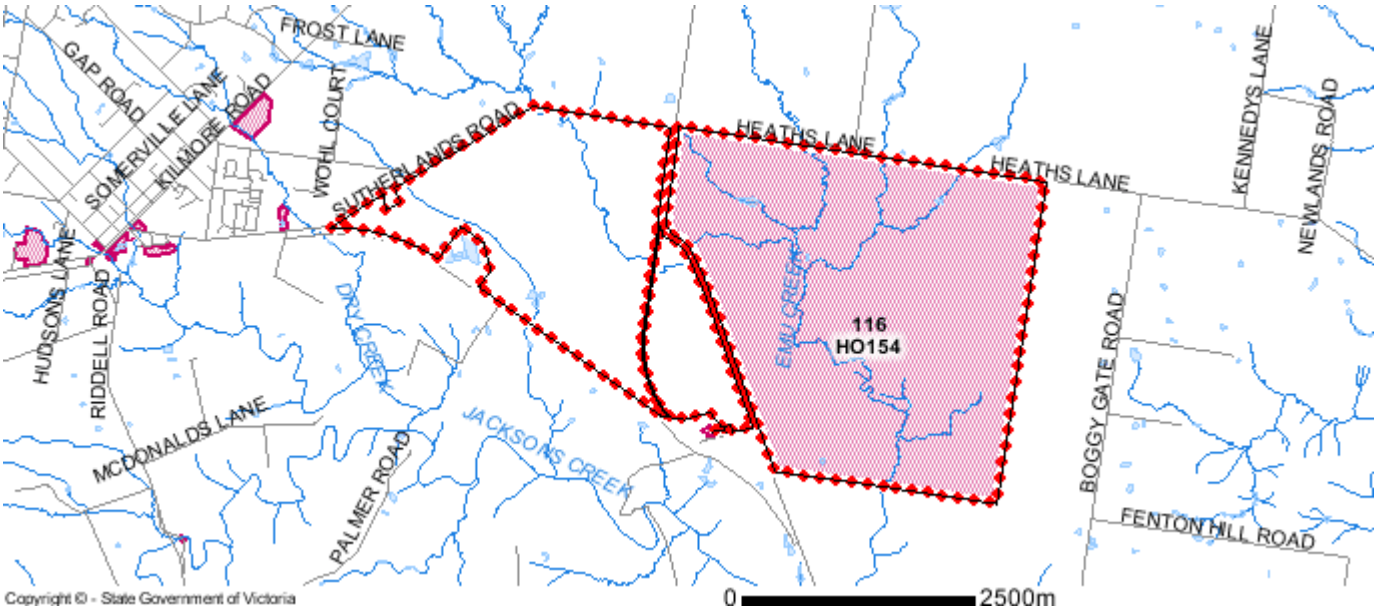
PLANNING PROPERTY REPORT

Planning Overlays

HERITAGE OVERLAY (HO)

HERITAGE OVERLAY SCHEDULE (HO154)



HO - Heritage

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Planning Overlays

OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

BUSHFIRE MANAGEMENT OVERLAY (BMO)

DESIGN AND DEVELOPMENT OVERLAY (DDO)

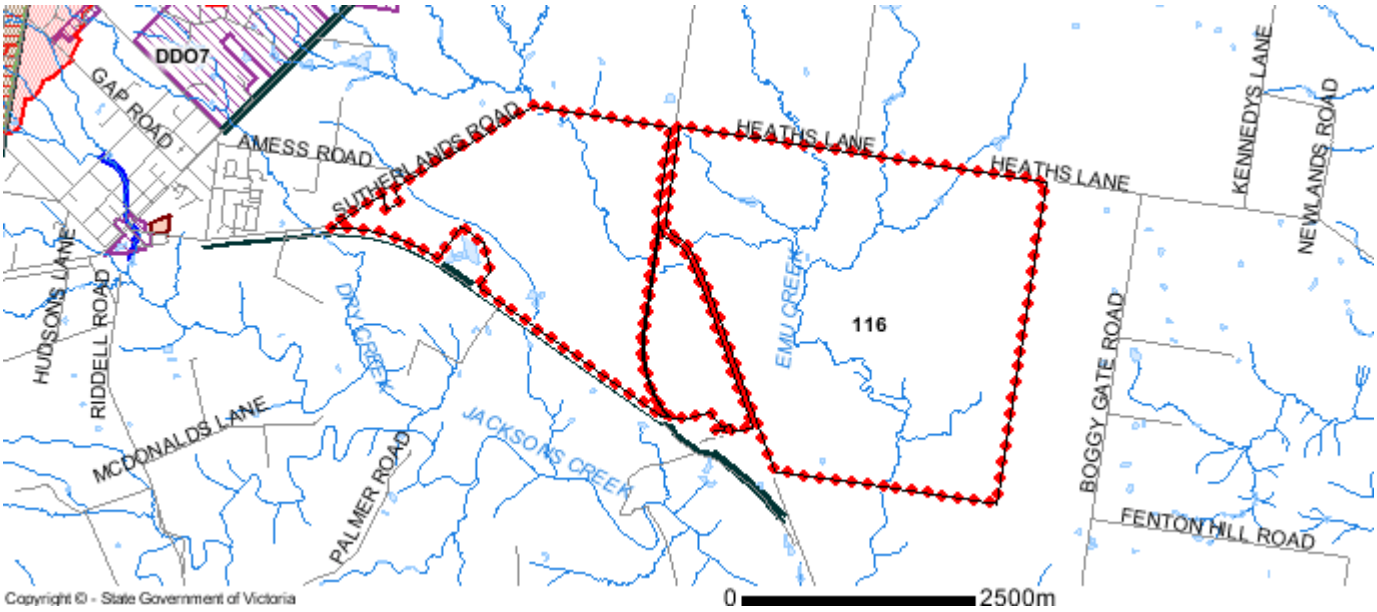
ENVIRONMENTAL AUDIT OVERLAY (EAO)

LAND SUBJECT TO INUNDATION OVERLAY (LSIO)

RESTRUCTURE OVERLAY (RO)

SIGNIFICANT LANDSCAPE OVERLAY (SLO)

VEGETATION PROTECTION OVERLAY (VPO)



BMO - Bushfire Management

DDO - Design and Development

EAO - Environmental Audit

LSIO - Land Subject to Inundation

RO - Restructure

SLO - Significant Landscape

VPO - Vegetation Protection

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Areas of Aboriginal Cultural Heritage Sensitivity

All or part of this property is an 'area of cultural heritage sensitivity'.

'Areas of cultural heritage sensitivity' are defined under the Aboriginal Heritage Regulations 2018, and include registered Aboriginal cultural heritage places and land form types that are generally regarded as more likely to contain Aboriginal cultural heritage.

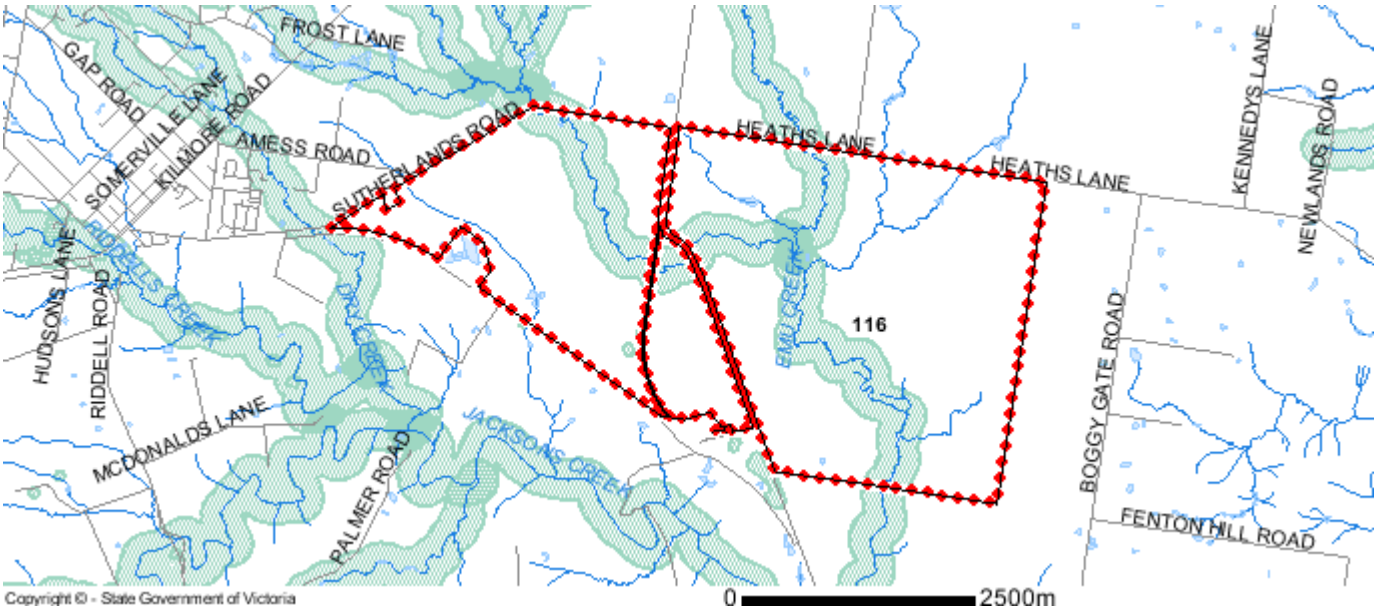
Under the Aboriginal Heritage Regulations 2018, 'areas of cultural heritage sensitivity' are one part of a two part trigger which require a 'cultural heritage management plan' be prepared where a listed 'high impact activity' is proposed.

If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to http://www.aav.nrms.net.au/aavQuestion1.aspx

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - https://www.vic.gov.au/aboriginalvictoria/heritage/planning-and-heritage-management-processes.html



Aboriginal Heritage

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Further Planning Information

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PLANNING PROPERTY REPORT

Designated Bushfire Prone Area

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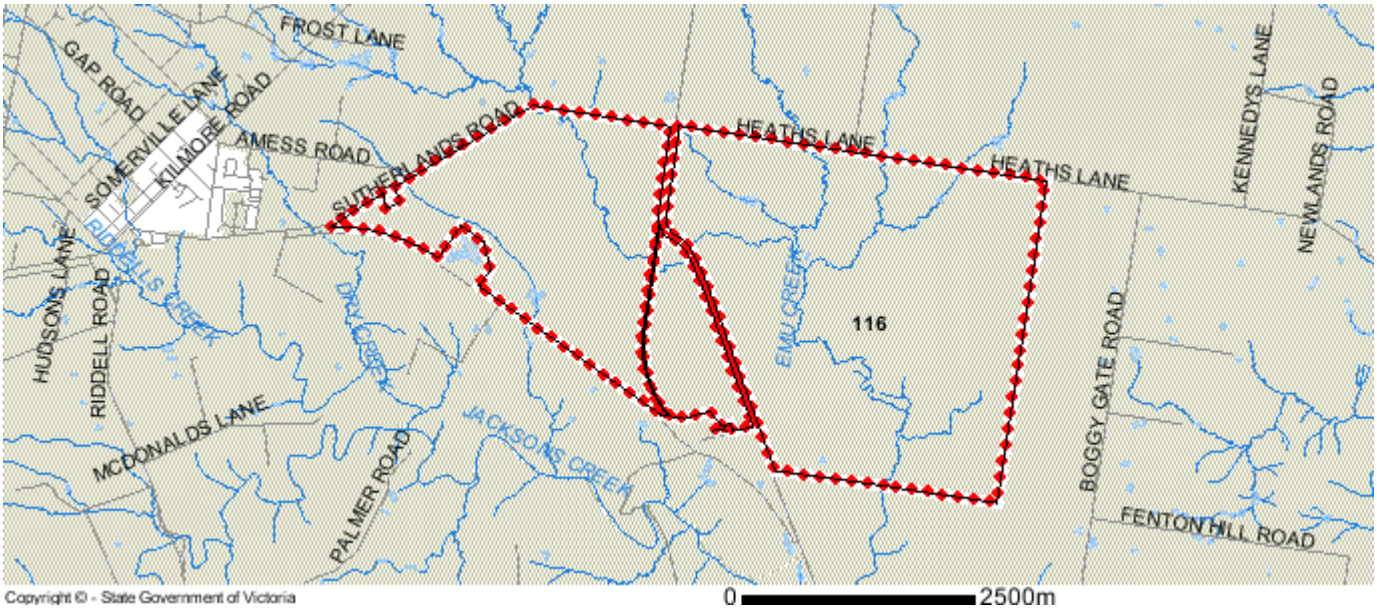

Designated Bushfire Prone Area

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PLANNING PROPERTY REPORT

From www.planning.vic.gov.au on 29 July 2019 03:55 PM

PROPERTY DETAILS

Lot and Plan Number:	**Lot 1 TP914006**	
Address:	**1227 MELBOURNE-LANCEFIELD ROAD CLARKEFIELD 3430**	
Standard Parcel Identifier (SPI):	**1\TP914006**	
Local Government Area (Council):	**MACEDON RANGES**	www.mrsc.vic.gov.au
Council Property Number:	**1168896** (Part)	
Planning Scheme:	**Macedon Ranges**	planning-schemes.delwp.vic.gov.au/schemes/macedonranges
Directory Reference:	**VicRoads 60 E9**	

This parcel is one of 3 parcels comprising the property. For full parcel details get the free Basic Property report at Property Reports

UTILITIES

Rural Water Corporation:	**Southern Rural Water**
Urban Water Corporation:	**Western Water**
Melbourne Water:	**inside drainage boundary**
Power Distributor:	**JEMENA**

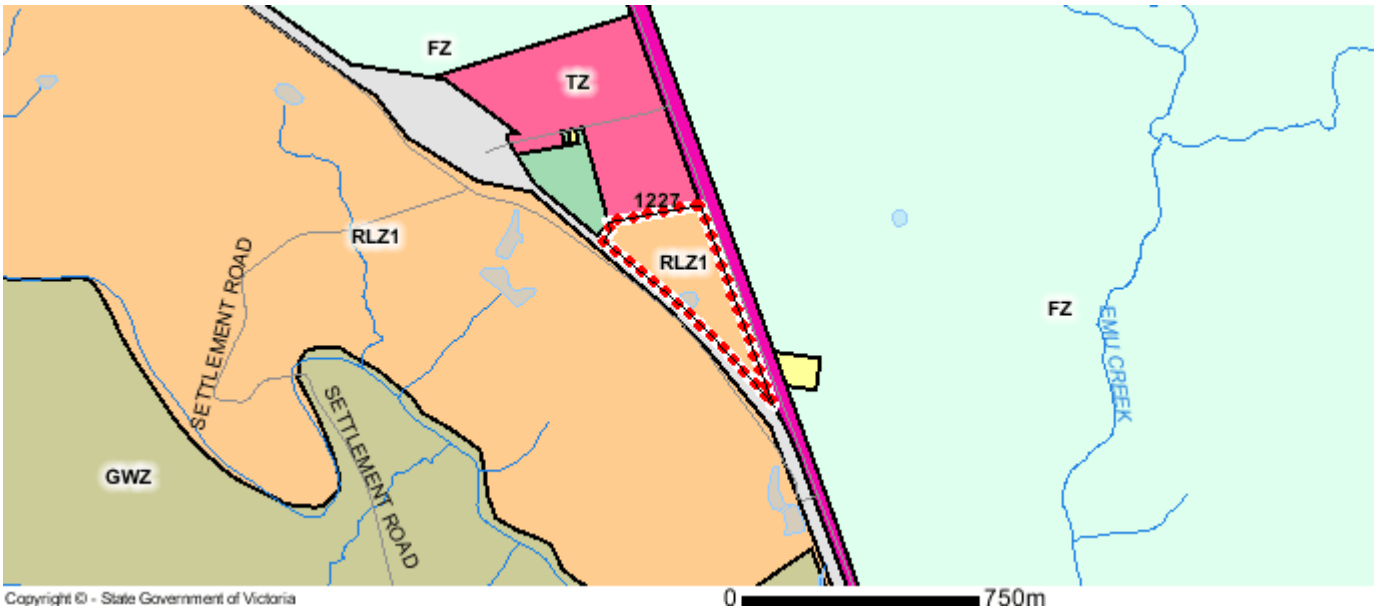
STATE ELECTORATES

Legislative Council:	**NORTHERN VICTORIA**
Legislative Assembly:	**MACEDON**

Planning Zones

RURAL LIVING ZONE (RLZ)

RURAL LIVING ZONE - SCHEDULE 1 (RLZ1)



FZ - Farming	GWZ - Green Wedge	PPRZ - Public Park & Recreation
PUZ2 - Public Use - Education	PUZ4 - Public Use - Transport	PUZ7 - Public Use - Other Public Use
RDZ1 - Road - Category 1	RLZ - Rural Living	TZ - Township

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PLANNING PROPERTY REPORT

Planning Overlay

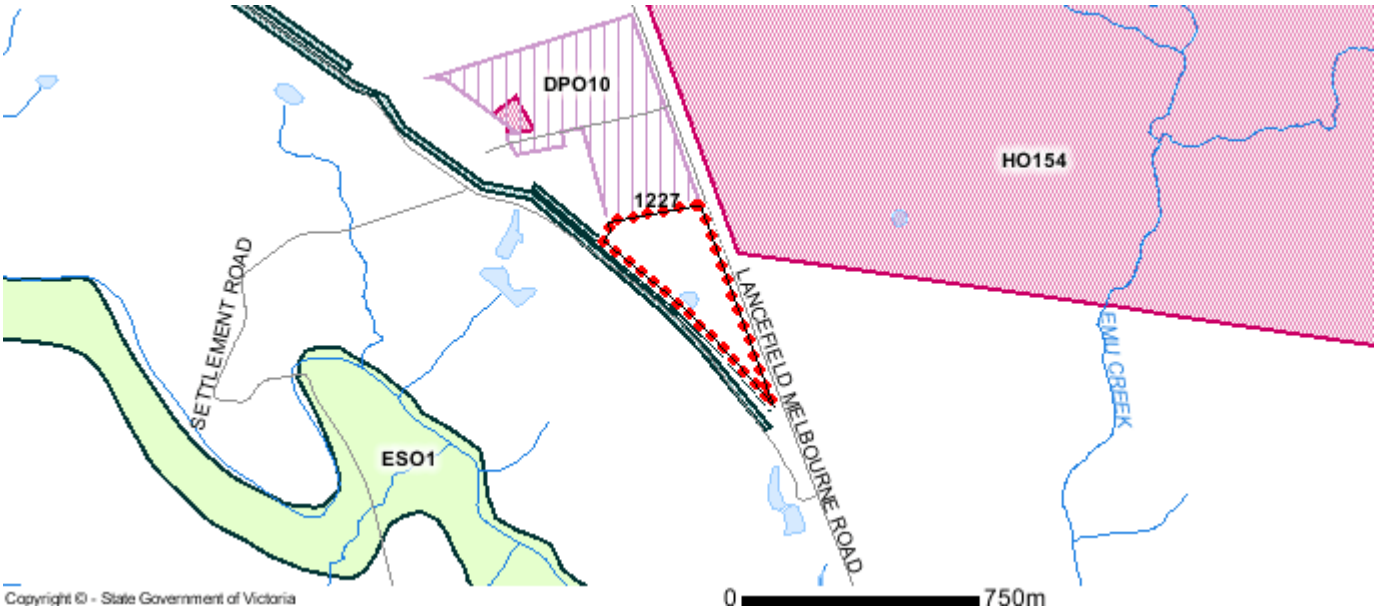
None affecting this land - there are overlays in the vicinity

DEVELOPMENT PLAN OVERLAY (DPO)

ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)

HERITAGE OVERLAY (HO)

VEGETATION PROTECTION OVERLAY (VPO)



DPO - Development Plan **ESO - Environmental Significance** **HO - Heritage**

VPO - Vegetation Protection

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If a significant land use change is proposed (for example, a subdivision into 3 or more lots), a cultural heritage management plan may be triggered. One or two dwellings, works ancillary to a dwelling, services to a dwelling, alteration of buildings and minor works are examples of works exempt from this requirement.

Under the Aboriginal Heritage Act 2006, where a cultural heritage management plan is required, planning permits, licences and work authorities cannot be issued unless the cultural heritage management plan has been approved for the activity.

For further information about whether a Cultural Heritage Management Plan is required go to http://www.aav.nrms.net.au/aavQuestion1.aspx

More information, including links to both the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018, can also be found here - https://www.vic.gov.au/aboriginalvictoria/heritage/planning-and-heritage-management-processes.html

Aboriginal Heritage

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Notwithstanding this disclaimer, a vendor may rely on the information in this report for the purpose of a statement that land is in a bushfire prone area as required by section 32C (b) of the Sale of Land 1962 (Vic).

Further Planning Information

Planning scheme data last updated on 25 July 2019.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.
This report provides information about the zone and overlay provisions that apply to the selected land.
Information about the State and local policy, particular, general and operational provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council
or by visiting https://www.planning.vic.gov.au

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the ***Planning and Environment Act 1987.***
It does not include information about exhibited planning scheme amendments, or zonings that may abut the land.
To obtain a Planning Certificate go to Titles and Property Certificates at Landata - https://www.landata.vic.gov.au

For details of surrounding properties, use this service to get the Reports for properties of interest.

To view planning zones, overlay and heritage information in an interactive format visit http://mapshare.maps.vic.gov.au/vicplan

For other information about planning in Victoria visit https://www.planning.vic.gov.au

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PLANNING PROPERTY REPORT

Designated Bushfire Prone Area

This parcel is in a designated bushfire prone area.
Special bushfire construction requirements apply. Planning provisions may apply.

Designated Bushfire Prone Area

Designated bushfire prone areas as determined by the Minister for Planning are in effect from 8 September 2011 and amended from time to time.

The Building Regulations 2018 through application of the Building Code of Australia, apply bushfire protection standards for building works in designated bushfire prone areas.

Designated bushfire prone areas maps can be viewed on VicPlan at http://mapshare.maps.vic.gov.au/vicplan or at the relevant local council.

Note: prior to 8 September 2011, the whole of Victoria was designated as bushfire prone area for the purposes of the building control system.

Further information about the building control system and building in bushfire prone areas can be found on the Victorian Building Authority website www.vba.vic.gov.au

Copies of the Building Act and Building Regulations are available from www.legislation.vic.gov.au

For Planning Scheme Provisions in bushfire areas visit https://www.planning.vic.gov.au

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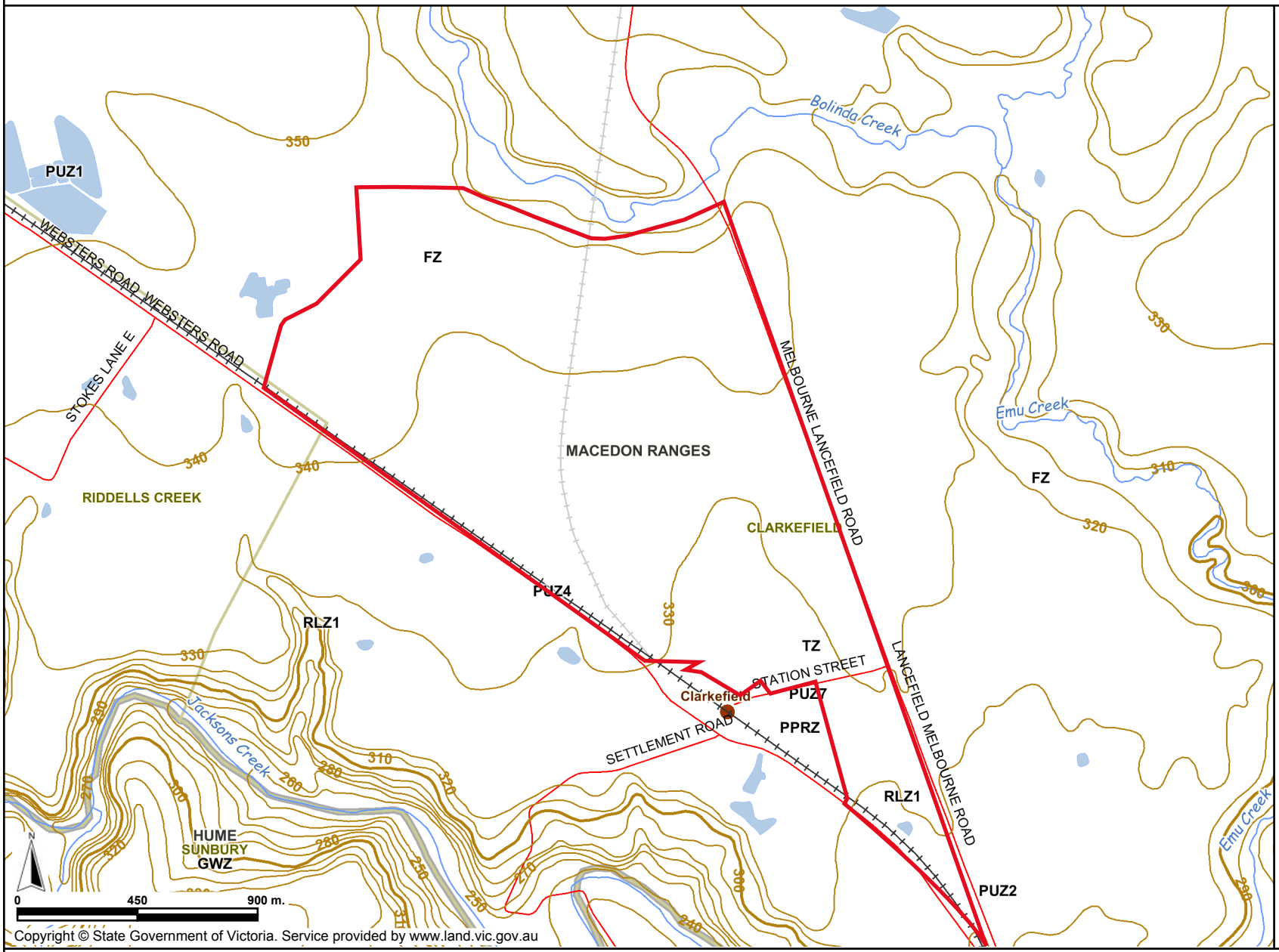
APPENDIX B

Environmental Records

Planning Map

Regional Topography

Department of Environment, Land Water and Planning



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Legend

- WARRNAMBOOL — Major Town
- Major Road, Road
- BOURKE STREET — Road name
- Railway, Tramway
- Property/Parcel, Selected
- 25 2 1C — Address, Lot, Crown allotment
- River, Stream, Coastline
- Waterbody
- Locality
- SEDDON — Locality Name
- Local Government Area
- BRIMBANK — Local Government Name
- Urban Growth Boundary (UGB)
- Area outside the UGB
- Investigation Area
- Land added to UGB since 2005
- Boundary of Searched Suburb

ZONES

- ACZ - Activity Centre
- B1Z - Commercial 1
- B2Z - Commercial 1
- B3Z - Commercial 2
- B4Z - Commercial 2
- B5Z - Commercial 1
- C1Z - Commercial 1
- C2Z - Commercial 2
- CA - Commonwealth Land
- CCZ - Capital City
- CDZ - Comprehensive Development
- DZ - Dockland
- ERZ - Environmental Rural
- FZ - Farming
- GRZ - General Residential
- GWAZ - Green Wedge A
- GWZ - Green Wedge
- IN1Z - Industrial 1
- IN2Z - Industrial 2
- IN3Z - Industrial 3
- LDRZ - Low Density Residential
- MUZ - Mixed Use
- NRZ - Neighbourhood Residential
- PCRZ - Public Conservation & Resource
- PDZ - Priority Development
- PPRZ - Public Park & Recreation
- PUZ1 - Public Use - Service & Utility
- PUZ2 - Public Use - Education
- PUZ3 - Public Use - Health Community
- PUZ4 - Public Use - Transport
- PUZ5 - Public Use - Cemetery/Crematorium
- PUZ6 - Public Use - Local Government
- PUZ7 - Public Use - Other Public Use
- PZ - Port
- R1Z - General Residential
- R2Z - General Residential
- R3Z - General Residential
- RAZ - Rural Activity
- RCZ - Rural Conservation
- RDZ1 - Road - Category 1
- RDZ2 - Road - Category 2
- RGZ - Residential Growth
- RLZ - Rural Living
- RUZ - Rural
- SUZ - Special Use
- TZ - Township
- UFZ - Urban Floodway
- UGZ - Urban Growth

OVERLAYS

- AEO - Airport Environs
- BMO - Bushfire Management
- CLPO - City Link Project
- DCPO - Development Contributions Plan
- DDO - Design & Development
- DDOPT - Design & Development Part
- DPO - Development Plan
- EAO - Environmental Audit
- EMO - Erosion Management
- ESO - Environmental Significance
- FO - Floodway
- HO - Heritage
- ICPO - Infrastructure Contributions Plan
- IPO - Incorporated Plan
- LSIO - Land Subject to Inundation
- MAEO1 - Melbourne Airport Environs 1
- MAEO2 - Melbourne Airport Environs 2
- NCO - Neighbourhood Character
- PO - Parking
- PAO - Public Acquisition
- RO - Restructure
- RCO - Road Closure
- SBO - Special Building
- SLO - Significant Landscape
- SMO - Salinity Management
- SRO - State Resource
- VPO - Vegetation Protection

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Map Centre - VicRoads 60 D9

Map Scale 1:21,415

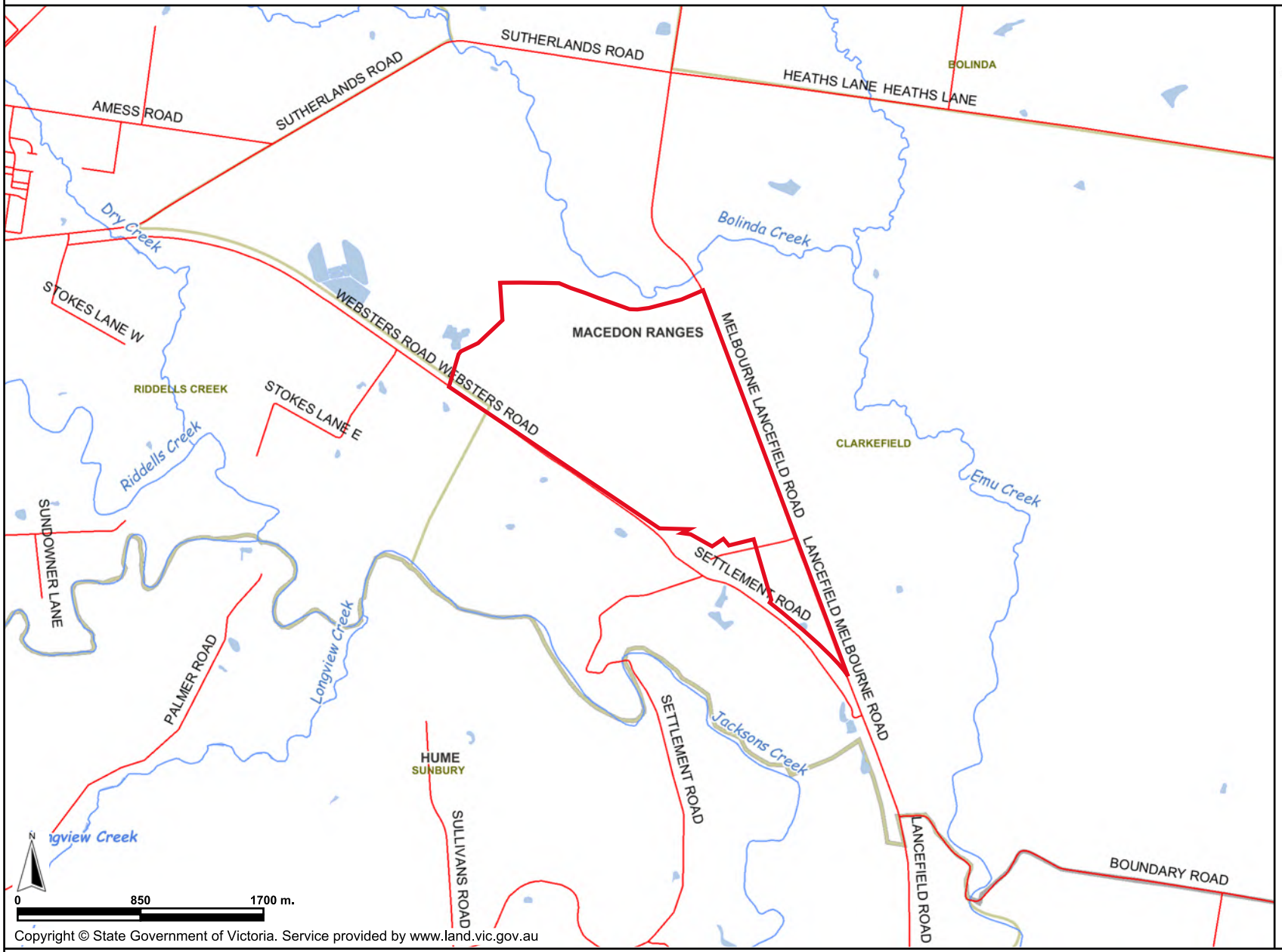
July 19, 2019 11:11:55 AM

VICTORIA State Government | Environment, Land, Water and Planning

Planning Map

Surface Water Receptors

Department of Environment, Land Water and Planning



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Map Centre - VicRoads 60 D9

Map Scale 1:39,531

July 29, 2019 3:22:57 PM

VICTORIA State Government | Environment, Land, Water and Planning

Geology Map

Project: **1788**

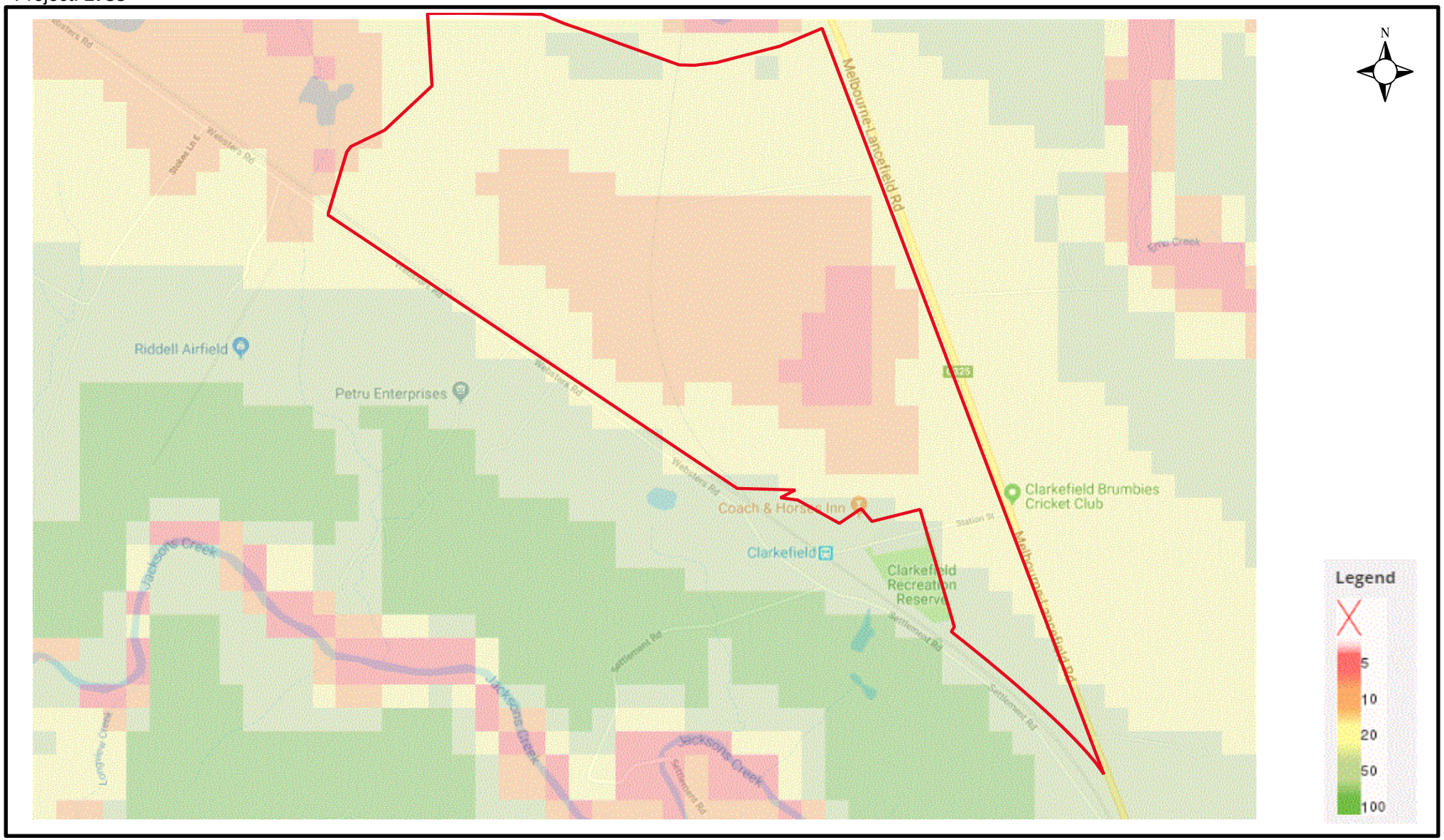
Atma Environmental

Site Boundary

Source:	**Visualising Victoria's Groundwater**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**29 July 2019**

Depth to watertable

Project: **1788**



Atma Environmental

Site Boundary

Source:	**Visualising Victoria's Groundwater**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**29 July 2019**

Groundwater salinity

Project: **1788**

N

Legend

- Less than 500 mg/l
- 500 - 1,000
- 1,000 3,500
- 3,500 - 7,000
- 7,000 - 13,000
- 13,000 - 35,000
- Greater than 35,000 mg/l

Atma Environmental

Site Boundary

Source:	**Visualising Victoria's Groundwater**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**18 July 2019**

Groundwater bores

Project: **1788**

Atma Environmental

Site Boundary

Source:	**Visualising Victoria's Groundwater**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**29 July 2019**

VVG Visualising Victoria's Groundwater

Bore Details: 70040

Export (bores/admin/bore_export.php?bore_ids=4269860&database=dse_gms) Print

Bore details | Aquifer | Monitoring | Chemistry | Lithology | Stratigraphy | Attachments

Location

Datum	Longitude	Latitude	MGA zone	Easting(m)	Northing(m)
GDA 1994	144.750159	-37.480090	55	301070.2	5849490.2

Surveyed Elevation (m AHD)	Digitised Elevation (m AHD)	Location Accuracy	Total Depth	Completion date
	330.45			1970-12-31

Ownership and usage

Bore Authority	Bore type	Bore use 1	Bore use 2	Bore use 3
	Groundwater			

Monitoring status	Monitoring frequency	Parish	Old Bore ID	Local Bore name
Not Monitored		KERRIE	8003	

Construction Details

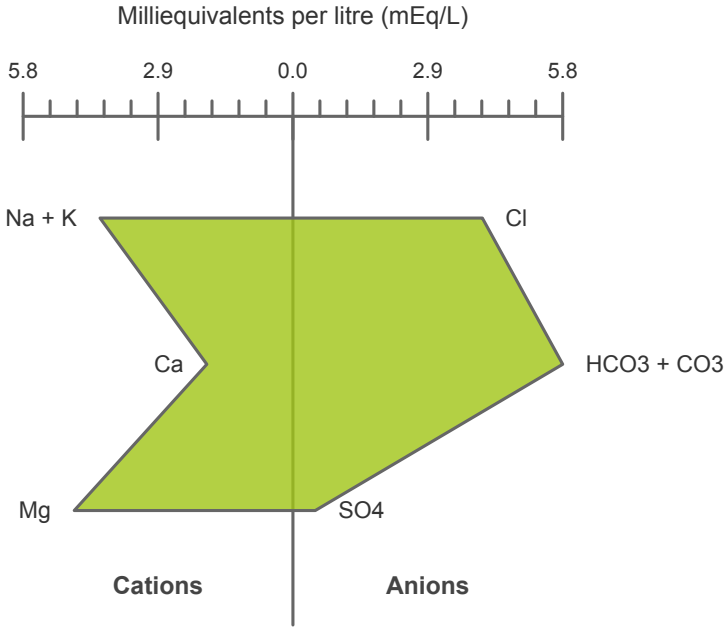
Driller	NOT KNOWN
Drilling method	NOT KNOWN

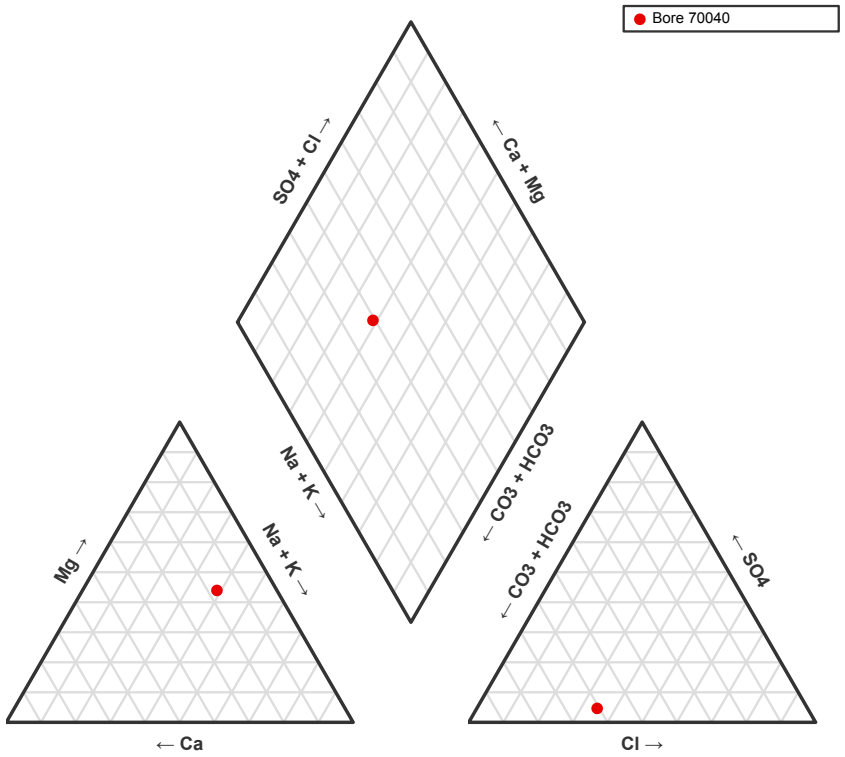
No aquifer details available

No water level records available for this bore

Hydrochemistry Details

Bore	70040
Sample date	1976-11-09 00:00:00
Purged?	NO
Sampling method	





Field Readings

Laboratory Readings

Conductivity (EC)	1600.00 mS/cm
Hardness (Hardness)	327.00 $mg.L^{-1}$
Total Iron (Fe Total)	0.10 mg/l

Major Ions

Bicarbonate ions (HCO_3^-)	353.00 mg/L
Calcium Ions (Ca^{++})	37.00 mg/l
Chloride ions (Cl^-)	144.00 mg/l
Magnesium Ions (Mg^{++})	57.00 mg/l
Potassium Ions (K^+)	7.00 mg/l
Sodium Ions (Na^+)	91.00 mg/l
Sulphate ions ($SO_4^=$)	23.00 mg/l

Other Ions

Nutrients

Nitrate as N (NO_2)	7.22 mg/l

Nutrients

No lithographical information available for this bore

No stratigraphy information for this bore

Further links

View this bore in the DELWP Water Measurement Information System (WMIS) system (http://data.water.vic.gov.au/static.htm?ppbm=70040&gw&0&gwlf_org)

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(https://federation.edu.au/)

VVG Visualising Victoria's Groundwater

Export (bores/admin/bore_export.php?bore_ids=4269863&database=dse_gms) Print

Bore Details: 70043

Bore details | Aquifer | Monitoring | Chemistry | Lithology | Stratigraphy | Attachments

Location

Datum	Longitude	Latitude	MGA zone	Easting(m)	Northing(m)
GDA 1994	144.753438	-37.484623	55	301372.2	5848994.2

Surveyed Elevation (m AHD)	Digitised Elevation (m AHD)	Location Accuracy	Total Depth	Completion date
	321.04			1970-12-31

Ownership and usage

Bore Authority	Bore type	Bore use 1	Bore use 2	Bore use 3
	Groundwater			

Monitoring status	Monitoring frequency	Parish	Old Bore ID	Local Bore name
Not Monitored		KERRIE	8006	

Construction Details

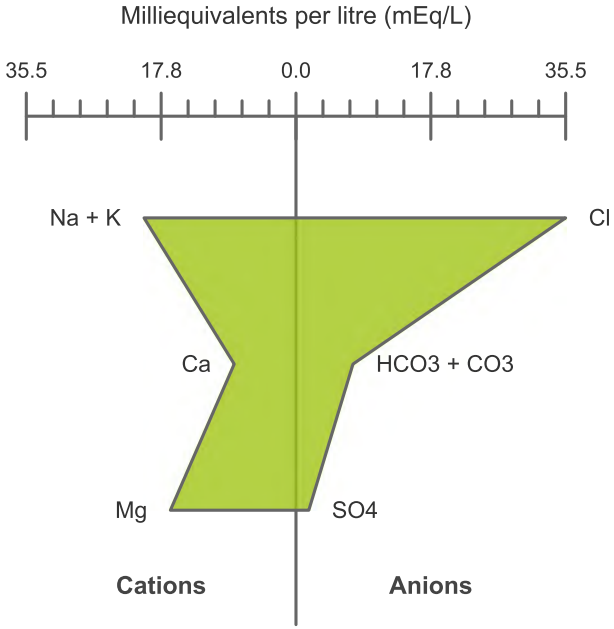
Driller	NOT KNOWN
Drilling method	NOT KNOWN

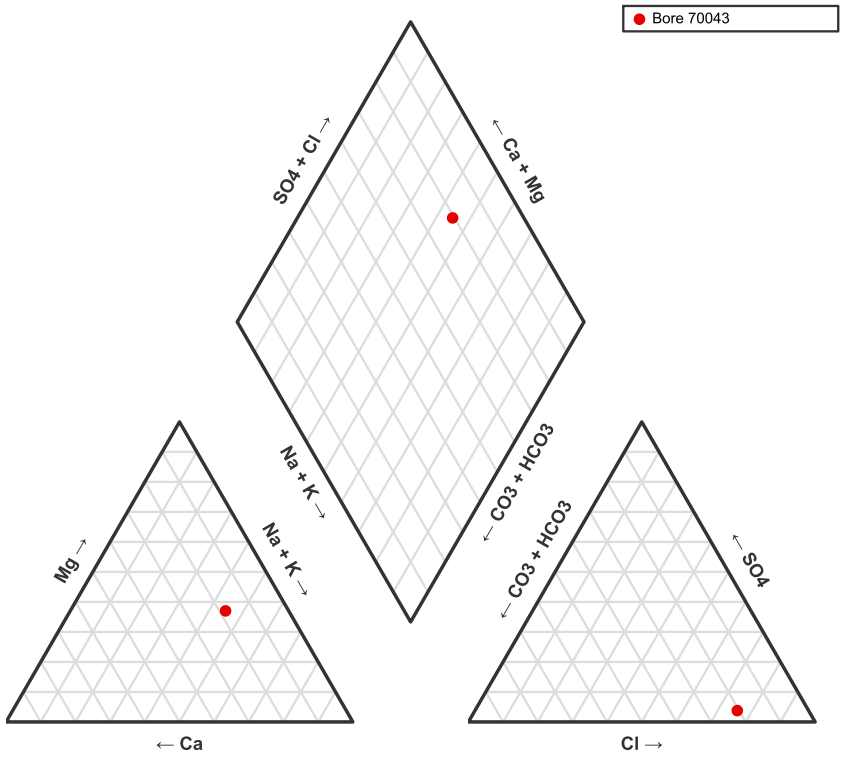
No aquifer details available

No water level records available for this bore

Hydrochemistry Details

Bore	70043
Sample date	1976-11-09 00:00:00
Purged?	NO
Sampling method	





Field Readings

Laboratory Readings

Conductivity (EC)	4480.00 mS/cm
Hardness (Hardness)	1234.00 $mg.L^{-1}$
Total Iron (Fe Total)	0.20 mg/l

Major Ions

Bicarbonate ions (HCO_3^-)	458.00 mg/L
Calcium Ions (Ca^{++})	163.00 mg/l
Chloride ions (Cl^-)	1259.00 mg/l
Magnesium Ions (Mg^{++})	201.00 mg/l
Potassium Ions (K^+)	12.00 mg/l
Sodium Ions (Na^+)	453.00 mg/l
Sulphate ions ($SO_4^=$)	81.00 mg/l

Other Ions

Nutrients

Nitrate as N (NO_2)	1.13 mg/l

Nutrients

No lithographical information available for this bore

No stratigraphy information for this bore

Further links

View this bore in the DELWP Water Measurement Information System (WMIS) system (http://data.water.vic.gov.au/static.htm?ppbm=70043&gw&0&gwlf_org)

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VVG Visualising Victoria's Groundwater

Export (bores/admin/bore_export.php?bore_ids=4269877&database=dse_gms) Print

Bore Details: 70057

Bore details | Aquifer | Monitoring | Chemistry | Lithology | Stratigraphy | Attachments

Location

Datum	Longitude	Latitude	MGA zone	Easting(m)	Northing(m)
GDA 1994	144.750366	-37.484880	55	301101.2	5848959.2

Surveyed Elevation (m AHD)	Digitised Elevation (m AHD)	Location Accuracy	Total Depth	Completion date
	322.35		64.50	1979-07-23

Ownership and usage

Bore Authority	Bore type	Bore use 1	Bore use 2	Bore use 3
	Groundwater			

Monitoring status	Monitoring frequency	Parish	Old Bore ID	Local Bore name
Not Monitored		KERRIE	10013	

Construction Details

Driller	SMART W H
Drilling method	CABLE TOOL

Casing type	Casing diameter	Casing From depth	Casing To depth
Steel	160.0 mm	0.00 m	4.20 m
PVC	150.0 mm	0.00 m	49.00 m

Screen type	Screen diameter	Screen aperture	Screened from	Screened to	Screened in
			49.00 m	64.50 m	

Aquifer details

Aquifer from (m)	Aquifer to (m)	Aquifer material	Aquifer Name	Source

Water from (m)	Water to (m)	Lithology

SWL when constructed (m)	EC when constructed (mS/cm)	TDS when constructed (mg/l)

Pumping Test

Pumping test date	1979-07-23 00:00:00
Pump depth (m)	

Aquifer parameters

Transmissivity (m^2/day)	
Hydraulic conductivity (m/d)	

Pump type	PUM
Pumping rate (l/s)	
Pumping time (hh:mm)	NULL
Drawdown (m)	
Recovery time (hh:mm)	NULL
Pumping data source	

Storativity	
Yield (l/s)	0.60
Data Source	NOT KNOWN

Aquifer details

Aquifer from (m)	Aquifer to (m)	Aquifer material	Aquifer Name	Source

Water from (m)	Water to (m)	Lithology

SWL when constructed (m)	EC when constructed (mS/cm)	TDS when constructed (mg/l)

Pumping Test

Pumping test date	1979-07-23 00:00:00
Pump depth (m)	55.00
Pump type	PUM
Pumping rate (l/s)	
Pumping time (hh:mm)	450.00

Aquifer parameters

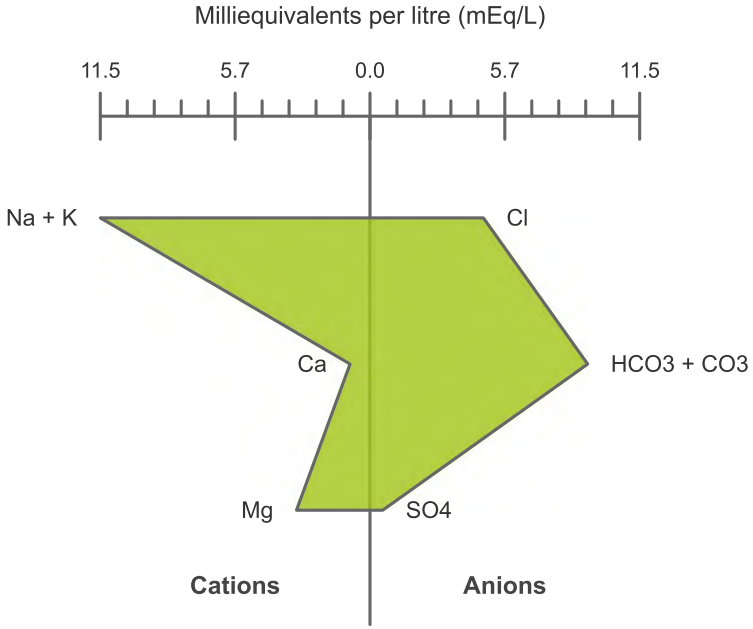
Transmissivity (m^2/day)	
Hydraulic conductivity (m/d)	
Storativity	
Yield (l/s)	0.60
Data Source	NOT KNOWN

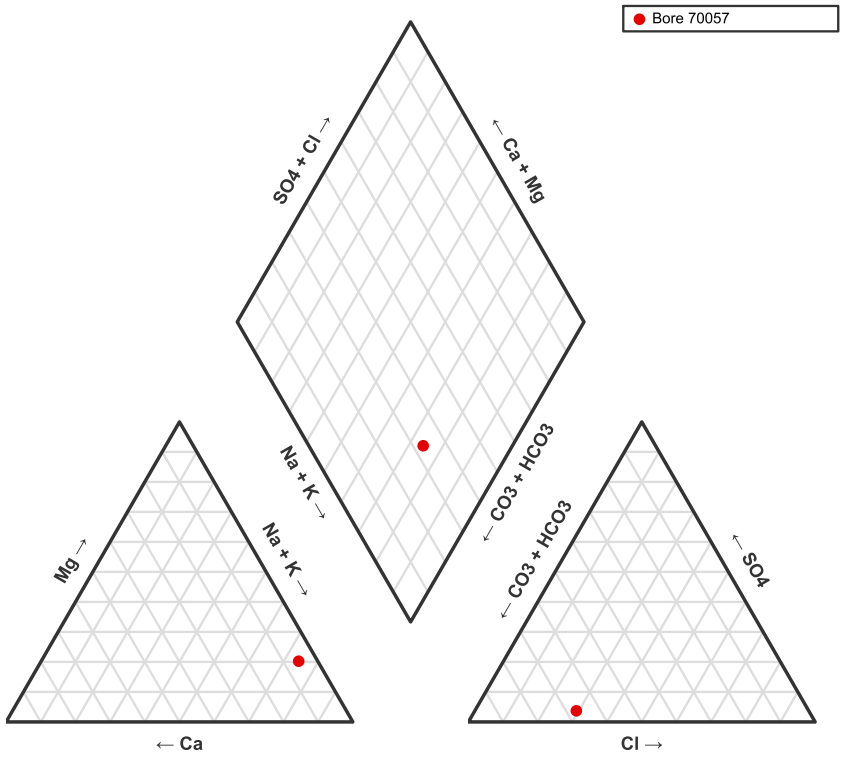
Drawdown (m)	
Recovery time (hh:mm)	NULL
Pumping data source	

No water level records available for this bore

Hydrochemistry Details

Bore	70057
Sample date	1978-12-27 00:00:00
Purged?	NO
Sampling method	





Field Readings

Laboratory Readings

Conductivity (EC)	1460.00 mS/cm
Hardness (Hardness)	199.00 $mg.L^{-1}$

Major Ions

Bicarbonate ions (HCO_3^-)	565.00 mg/L
Calcium Ions (Ca^{++})	17.00 mg/l
Carbonate ions ($CO_3^=$)	18.00 mg/l
Chloride ions (Cl^-)	171.00 mg/l
Magnesium Ions (Mg^{++})	38.00 mg/l
Potassium Ions (K^+)	8.00 mg/l
Sodium Ions (Na^+)	259.00 mg/l
Sulphate ions ($SO_4^=$)	26.00 mg/l

Other Ions

Log Type	From (m)	To (m)	Description
Driller	0.00	2.50	TOP SOIL
Driller	2.50	12.00	BASALT
Driller	12.00	15.00	RED CLAY
Driller	15.00	19.00	GREEN BASALT

Driller	19.00	21.00	FRAC BASALT
Driller	21.00	42.00	GREEN BASALT
Driller	42.00	49.00	WEATHERED BASALT
Driller	49.00	55.00	BLUE GREEN BASALT
Driller	55.00	60.00	WEATHERED BASALT
Driller	60.00	64.50	FRAC BASALT
Geologist	49.00	64.50	BASALT

No stratigraphy information for this bore

Further links

View this bore in the DELWP Water Measurement Information System (WMIS) system (http://data.water.vic.gov.au/static.htm?ppbm=70057&gw&0&gwlf_org)

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(https://federation.edu.au/)

VVG Visualising Victoria's Groundwater

Export (bores/admin/bore_export.php?bore_ids=4224803&database=dse_gms) Print

Bore Details: 319775

Bore details | Aquifer | Monitoring | Chemistry | Lithology | Stratigraphy | Attachments

Location

Datum	Longitude	Latitude	MGA zone	Easting(m)	Northing(m)
GDA 1994	144.749515	-37.483079	55	301021.2	5849157.2

Surveyed Elevation (m AHD)	Digitised Elevation (m AHD)	Location Accuracy	Total Depth	Completion date
	324.72		46.00	1974-10-07

Ownership and usage

Bore Authority	Bore type	Bore use 1	Bore use 2	Bore use 3
	Groundwater			

Monitoring status	Monitoring frequency	Parish	Old Bore ID	Local Bore name
Not Monitored		MERRIANG	5	

Construction Details

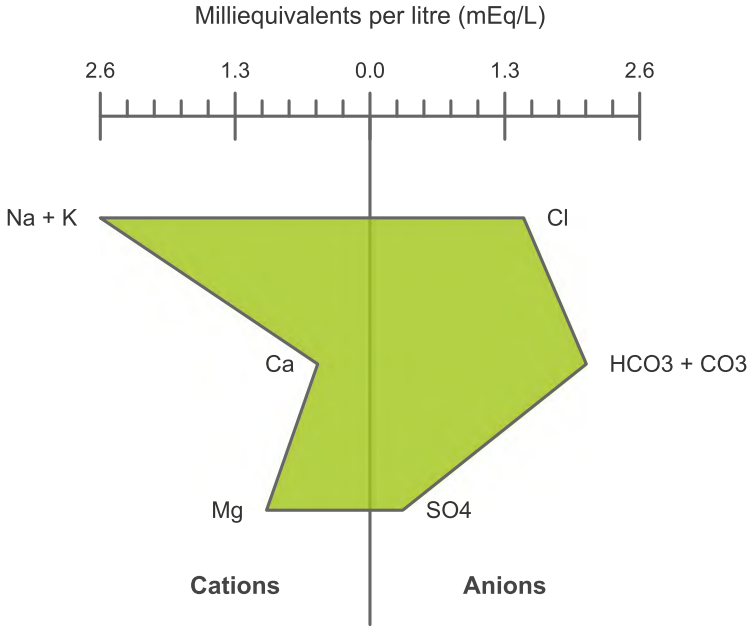
Driller	NOT KNOWN

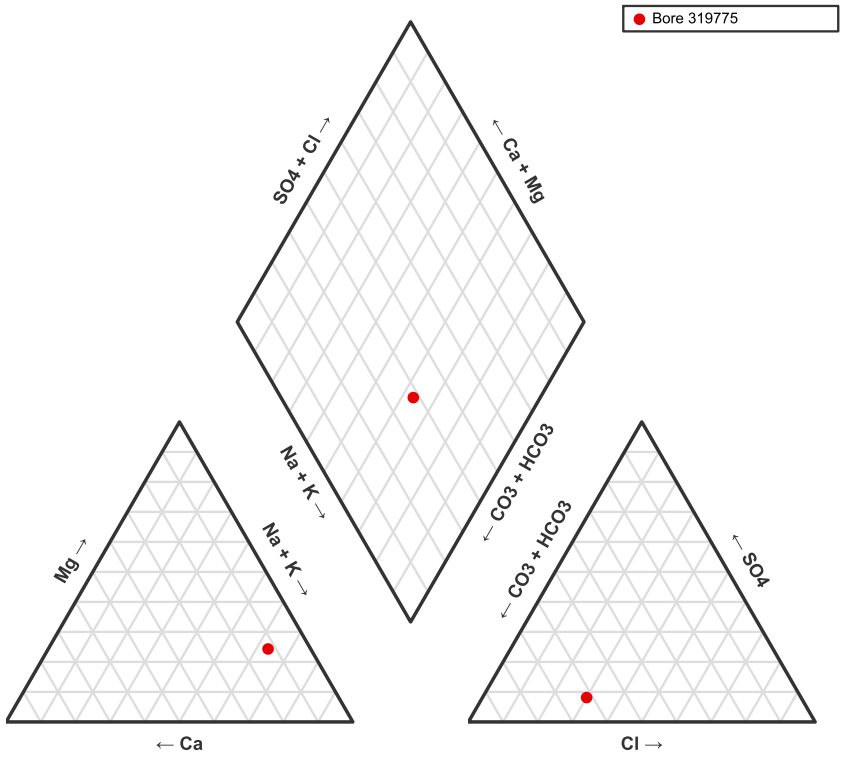
No aquifer details available

No water level records available for this bore

Hydrochemistry Details

Bore	319775
Sample date	1977-09-20 00:00:00
Purged?	NO
Sampling method	





Field Readings

Laboratory Readings

Conductivity (EC)	408.00 mS/cm
Hardness (Hardness)	75.00 $mg.L^{-1}$
Total Iron (Fe Total)	11.00 mg/l

Major Ions

Bicarbonate ions (HCO_3^-)	126.00 mg/L
Calcium Ions (Ca^{++})	10.00 mg/l
Chloride ions (Cl^-)	52.00 mg/l
Magnesium Ions (Mg^{++})	12.00 mg/l
Potassium Ions (K^+)	2.00 mg/l
Sodium Ions (Na^+)	58.00 mg/l
Sulphate ions ($SO_4^=$)	15.00 mg/l

Other Ions

Nutrients

Nitrate as N (NO_2)	2.03 mg/l

Nutrients

No lithographical information available for this bore

No stratigraphy information for this bore

Further links

View this bore in the DELWP Water Measurement Information System (WMIS) system (http://data.water.vic.gov.au/static.htm?ppbm=319775&gw&0&gwlf_org)

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(https://federation.edu.au/)

PRIORITY SITES REGISTER

Information as at 30 June 2019

The Priority Sites Register is updated monthly and the information on it may not be accurate, current or complete and may be subject to change without notice.

EPA has a key responsibility in protecting beneficial uses of land. Many of these uses are regulated or controlled through a range of measures to prevent contamination of land and groundwater. Land contaminated by former waste disposal, industrial and similar activities is frequently discovered during changes to land use - for example, from industrial to residential use. In most cases these can be managed at the time that the change of land use occurs. Some sites however, present a potential risk to human health or to the environment and must be dealt with as a priority. Such sites are typically subject to clean-up and/or management under EPA directions.

WHAT ARE PRIORITY SITES?

Priority Sites are sites for which EPA has issued a Clean Up Notice pursuant to section 62A, or a Pollution Abatement Notice pursuant to section 31A or 31B (relevant to land and/or groundwater) of the *Environment Protection Act 1970.* Typically these are sites where pollution of land and/or groundwater presents a potential risk to human health or to the environment. The condition of these sites is not compatible with the current or approved use of the site without active management to reduce the risk to human health and the environment. Such management can include clean up, monitoring and/or institutional controls.

The Priority Sites Register does not list sites managed by voluntary agreements or sites subject to management by planning controls (e.g. sites managed in accordance with a section 173 agreement under the *Planning and Environment Act 1987*). Land purchasers should be aware of these limitations and make their own enquiries. A site is listed on the Priority Sites Register when EPA issues a Clean Up Notice or a Pollution Abatement Notice (relevant to land and/or groundwater). A notice is a means by which EPA formalises requirements to manage pollution. Sites are removed from the Priority Sites Register once all conditions of a Notice have been complied with. This is formalised through a Notice of Revocation pursuant to section 60B of the Act.

DISCLAIMER

Users of this site accept all risks and responsibilities for losses, damages, costs and other consequences resulting directly or indirectly from use of this site and information from it.

To the maximum permitted by law, the EPA excludes all liability to any person directly or indirectly from using this site and information from it.

FURTHER INFORMATION

Additional information is available from:
EPA Information Centre
200 Victoria Street
Carlton VIC 3053
1300 EPA VIC (1300 372 842)
www.epa.vic.gov.au

Municipality	Suburb	Address	Issue	Notice Number
Ararat Rural City Council	ARARAT	26 Grano ST	Former Industrial Site. Requires assessment and/or clean up.	0090001739
Ballarat City Council	BALLARAT	1003 Humffray ST	Former Industrial Site. Requires assessment and/or clean up.	0090001857
Ballarat City Council	BALLARAT	Volume 6747 Folio 250	Current Industrial Site. Requires assessment and/or clean up.	0090001913
Ballarat City Council	Black Hill	Crown Allotment 13A Section 35 Township of Ballarat East	Former Landfill. Requires ongoing management.	0090009627
Ballarat City Council	BUNKERS HILL	856 Greenhalghs RD	Current Industrial Site. Requires ongoing management.	0090004647
Ballarat City Council	MOUNT CLEAR	3 WHITEHORSE RD	Former Landfill. Requires ongoing management.	0090003912
Ballarat City Council	MOUNT CLEAR	Whitehorse RD	Former Landfill. Requires assessment and/or clean up.	0090004207
Bass Coast Shire Council	GLEN FORBES	1685 BASS HWY	Current landfill. Requires assessment and/or clean up.	0090009939
Bass Coast Shire Council	WONTHAGGI	C/a 15 Section 58 Cameron St	Former Landfill. Requires ongoing management.	0090006816
Baw Baw Shire Council	JINDIVICK	15 BEATTIE RD	Illegal dumping. Requires assessment and/or clean up.	0090008457
Baw Baw Shire Council	TRAFALGAR SOUTH	200 GILES RD	Former Landfill. Requires ongoing management.	0090007302

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Bayside City Council	Brighton	(Part) Lot 2/TP963646N (As per Section 5, Figure 1.0	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090008780
Bayside City Council	BRIGHTON	322 NEW ST	Former Service Station. Requires assessment and/or clean up.	0090008943
Bayside City Council	BRIGHTON	326 NEW ST	Former Industrial Site. Requires assessment and/or clean up.	0090008944
Bayside City Council	Cheltenham	Lot 3, PS802507T 322-328 Bay Road	Former Industrial Site. Requires assessment and/or clean up.	0090010027
Bayside City Council	CHELTENHAM	Lot 2, PS802507T 322-328 Bay Road	Current Industrial Site. Requires ongoing management.	0090008422
Bayside City Council	CHELTENHAM	322 - 328 BAY RD	Former Industrial Site. Requires assessment and/or clean up.	0090010025
Bayside City Council	CHELTENHAM	Lot 2, PS802507T 322-328 Bay Road	Former Industrial Site. Requires assessment and/or clean up.	0090010026
Bayside City Council	CHELTENHAM	322 - 328 BAY RD	Former Industrial Site. Requires assessment and/or clean up.	0090010028
Bayside City Council	Sandringham	Part Lot 1/TP125095-excludes Scout Hall Lot 2/LP62334	Former Industrial Site. Requires ongoing management.	0090007233
Brimbank City Council	Albion	SUNSHINE ENERGY PARK 570A Ballarat Road And	Former Landfill. Requires ongoing management.	0090007761
Brimbank City Council	ALBION	Carrington Drive Reserve 137A Denton Avenue ST ALBANS	Former Landfill. Requires ongoing management.	0090005541
Brimbank City Council	ARDEER	22 - 24 REID ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090007084
Brimbank City Council	ARDEER	14A & 14-18 REID STREET	Current Industrial Site. Requires assessment and/or clean up.	0090008190
Brimbank City Council	BROOKLYN	594 GEELONG RD	Former Landfill. Requires ongoing management.	0090003478
Brimbank City Council	BROOKLYN	44 - 60 Mcdonald RD	Former Landfill. Requires ongoing management.	0090003589
Brimbank City Council	BROOKLYN	44 - 60 Mcdonald RD	Former Landfill. Requires ongoing management.	0090003591
Brimbank City Council	BROOKLYN	174 OLD GEELONG RD	Former Landfill. Requires ongoing management.	0090006102
Brimbank City Council	BROOKLYN	52 - 60 MARKET RD	Former Landfill. Requires ongoing management.	0090007782
Brimbank City Council	BROOKLYN	69 BUNTING RD	Current Industrial Site. Requires assessment and/or clean up.	0090008957
Brimbank City Council	Cairnlea	Lot C of Draft Plan of Subdivision PS 801014Y	Contaminated soil is retained and managed onsite. Requires ongoing management.	0090005971
Brimbank City Council	DEER PARK	765 BALLARAT RD	Former Industrial Site. Requires assessment and/or clean up.	0090001886
Brimbank City Council	DEER PARK	753 Tilburn RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up.	0090009143
Brimbank City Council	KEILOR DOWNS	Green Gully RD	Former Landfill. Requires ongoing management.	0090005738
Brimbank City Council	SUNSHINE	16 - 20 THIRD AV	Current Industrial Site. Requires assessment and/or clean up.	0090003227
Brimbank City Council	SUNSHINE NORTH	47 MCINTYRE RD	Former Industrial Site. Requires ongoing management.	0090001549
Brimbank City Council	SUNSHINE NORTH	49 AUBURN AV	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090007459
Brimbank City Council	SUNSHINE NORTH	49 AUBURN AV	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090007621
Brimbank City Council	SYDENHAM	362 SYDENHAM RD	Former Landfill. Requires assessment and/or clean up.	0090000921
Brimbank City Council	SYDENHAM	362 SYDENHAM RD	Former Landfill. Requires ongoing management.	0090003753
Brimbank City Council	TULLAMARINE	6 Prima Court EISNER CT	Illegal dumping. Requires assessment and/or clean up.	0090005495
Buloke Shire Council	BIRCHIP	CA 53B-D Parish of Wirmbirchip, SUNRAYSIA HWY	Former Landfill. Requires ongoing management.	0090009001
Buloke Shire Council	CHARLTON	21 DAVIES ST	Current petroleum storage site. Requires assessment and/or clean up.	0090009910
Buloke Shire Council	DONALD	22 (LOTS 40-45\LP8761) NAPIER ST	Former petroleum storage site. Requires assessment and/or clean up.	0090007710
Campaspe Shire Council	BAMAWM EXTENSION	1133 ECHUCA-MITIAMO RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090001745
Campaspe Shire Council	DIGGORA	ODONNELL RD	Former Landfill. Requires ongoing management.	0090006552

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Campaspe Shire Council	ECHUCA	436 MCKENZIE RD	Former Landfill. Requires ongoing management.	0090007220
Campaspe Shire Council	ECHUCA	176 - 190 OGILVIE AV	Former petroleum storage site. Requires assessment and/or clean up.	0090008435
Campaspe Shire Council	ECHUCA	110 - 112 STURT ST	Former Service Station. Requires ongoing management.	0090008471
Campaspe Shire Council	KYABRAM	Graham RD	Former Landfill. Requires ongoing management.	0090007207
Cardinia Shire Council	PAKENHAM	570 Bald Hill Road	Former Landfill. Requires ongoing management.	0090003597
Casey City Council	CRANBOURNE	Lot 7, 9, 10, 11 & 12 Stevensons Rd	Former Landfill. Requires ongoing management.	0090006965
Casey City Council	Narre Warren	former Narre Warren Landfill 184	Former Landfill. Requires ongoing management.	0090003600
Central Goldfields Shire Council	CARISBROOK	129 WILLIAMS RD	Former Landfill. Requires ongoing management.	0090006580
Central Goldfields Shire Council	Maryborough	82 (Lot 1\TP9631G) Sutton RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009435
Central Goldfields Shire Council	MARYBOROUGH	53 - 55 HIGH ST	Current Service Station. Requires assessment and/or clean up.	0090005850
Central Goldfields Shire Council	TALBOT	5360 BALLARAT-MARYBOROUGH RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up.	0090009597
Colac-Otway Shire Council	COLAC	Bruce ST	Former Landfill. Requires ongoing management.	0090001464
Colac-Otway Shire Council	COLAC	2 - 34 BRUCE ST	Former Landfill. Requires ongoing management.	0090003696
Colac-Otway Shire Council	MARENGO	Roberts RD	Former Landfill. Requires ongoing management.	0090003634
Corangamite Shire Council	GLENORMISTON	Terang-Mortlake RD	Former Landfill. Requires ongoing management.	0090003621
Corangamite Shire Council	GLENORMISTON	Terang-Mortlake RD	Former Landfill. Requires ongoing management.	0090003622
Corangamite Shire Council	TERANG	59 BEND RD	Current Industrial Site. Requires assessment and/or clean up.	0090007044
Corangamite Shire Council	TERANG	59 BEND RD	Current Industrial Site. Requires assessment and/or clean up.	0090007045
Darebin City Council	NORTHCOTE	Clifton ST	Former Landfill. Requires ongoing management.	0090003493
Darebin City Council	PRESTON	67 - 79 High ST	Former Service Station. Requires assessment and/or clean up.	0090001449
Darebin City Council	PRESTON	194 - 202 Bell ST	Former Industrial Site. Requires assessment and/or clean up.	0090006966
Darebin City Council	RESERVOIR	3B Newlands Road (formerly Lot 87 Newlands Rd) which includes 3A, rear 3B	Former Landfill. Requires ongoing management.	0090003508
East Gippsland Shire Council	BAIRNSDALE	68 GILES ST	Former Landfill. Requires ongoing management.	0090006577
East Gippsland Shire Council	ORBOST	44 SALISBURY ST	Former Service Station. Requires assessment and/or clean up.	0090008454
Frankston City Council	3200	CA 21089 CA 2006	Former Landfill. Requires ongoing management.	0090003594
Glen Eira City Council	CAULFIELD SOUTH	818 Glen Huntly RD	Former Service Station. Requires ongoing management.	0090009502
Glenelg Shire Council	PORTLAND	Madeira Packet RD	Current Industrial Site. Requires assessment and/or clean up.	0090009736
Greater Bendigo City Council	BENDIGO	49 Sandhurst (CA 582~M \PP3473B) RD	Former petroleum storage site. Requires assessment and/or clean up.	0090009550
Greater Bendigo City Council	California Gully	CA 269H, 115, 116, 117, 118, 119, Sec N Cnr Bright St & Wingoon Drive	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009604
Greater Bendigo City Council	California Gully	CA252B Sec N, Pearce St Parish of Sandhurst	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009641
Greater Bendigo City Council	FLORA HILL	67 HAVLIN ST	Former Landfill. Requires ongoing management.	0090009138
Greater Bendigo City Council	HEATHCOTE	90 HIGH ST	Former Service Station. Requires assessment and/or clean up.	0090007629
Greater Bendigo City Council	HUNTLY	29 CAELLIS RD	Current Industrial Site. Requires assessment and/or clean up.	0090007149

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Greater Bendigo City Council	Jackass Flat	CA 269N, Sec N & CA 2, Sec F11 Parish Sandhurst	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009599
Greater Bendigo City Council	Jackass Flat	Government Road south of CA 119, Sec N & Prouses Road between Bright St, south to	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009606
Greater Bendigo City Council	JACKASS FLAT	CA 269F & 269L, Section N Parish of Sandhurst, Averys Road	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009643
Greater Bendigo City Council	Maiden Gully	CA 64B, Parish of Sandhurst Sparrowhawk Road	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009608
Greater Bendigo City Council	MAIDEN GULLY	195 - 221 MARONG RD	Historical deposit of mine tailings. Requires assessment and/or clean up.	0090009609
Greater Bendigo City Council	North Bendigo	CA 2081 Parish of Sandhurst	Historical deposit of mine tailings. Requires ongoing management.	0090009821
Greater Bendigo City Council	West Bendigo	Liddell's Calcine Sands Derwent Gully Road	Historical deposit of mine tailings. Requires ongoing management.	0090007892
Greater Dandenong City Council	Bangholme	Cnr Thompson Road and Worsley Road	Current Industrial Site. Requires ongoing management.	0090007162
Greater Dandenong City Council	DANDENONG SOUTH	185 Dandenong-Hastings RD	Former Landfill. Requires ongoing management.	0090004214
Greater Dandenong City Council	DANDENONG SOUTH	Greens Road GREENS RD	Current waste water treatment plant. Requires ongoing management.	0090006097
Greater Dandenong City Council	SPRINGVALE	917 Princes HWY	Former Industrial Site. Requires ongoing management.	0090007482
Greater Dandenong City Council	SPRINGVALE	310 Springvale RD	Current Service Station. Requires assessment and/or clean up.	0090009753
Greater Dandenong City Council	Springvale South	98-100 Clarke Road	Former Landfill. Requires ongoing management.	0090007896
Greater Dandenong City Council	SPRINGVALE SOUTH	81 - 143 CLARKE RD	Former Landfill. Requires ongoing management.	0090000608
Greater Dandenong City Council	SPRINGVALE SOUTH	81 - 143 CLARKE RD	Former Landfill. Requires ongoing management.	0090003693
Greater Dandenong City Council	SPRINGVALE SOUTH	168-222 CLARKE ROAD	Former Landfill. Requires ongoing management.	0090006951
Greater Dandenong City Council	SPRINGVALE SOUTH	81 - 143 CLARKE RD	Former Landfill. Requires assessment and/or clean up.	0090008992
Greater Geelong City Council	BALLAN	1 6511 Western FWY	Current Service Station. Requires ongoing management.	0090006079
Greater Geelong City Council	Belmont	180 - 182 Barwon Heads RD	Former Service Station. Requires ongoing management.	0090009781
Greater Geelong City Council	BELMONT	180 - 182 Barwon Heads RD	Former Service Station. Requires ongoing management.	0090009284
Greater Geelong City Council	CONNEWARRE	1421 BARWON HEADS RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up.	0090009930
Greater Geelong City Council	CORIO	83 Purnell RD	Current Service Station. Requires ongoing management.	0090002343
Greater Geelong City Council	CORIO	1500 - 1580 BIDDLECOMBE AV	Former Landfill. Requires ongoing management.	0090004271
Greater Geelong City Council	CORIO	246 - 258 Princes HWY	Current petroleum storage site. Requires ongoing management.	0090006264
Greater Geelong City Council	CORIO	90 REFINERY RD	Current petroleum storage site. Requires ongoing management.	0090006483
Greater Geelong City Council	DRYSDALE	97 High ST	Current Service Station. Requires ongoing management.	0090001808
Greater Geelong City Council	EAST GEELONG	101 - 161 HEARNE PDE	Gun, pistol or rifle range. Requires assessment and/or clean up.	0090006642
Greater Geelong City Council	GEELONG NORTH	1 - 39 Roseneath ST	Former chemical storage facility. Requires assessment and/or clean up.	0090001664
Greater Geelong City Council	LARA	Princes HWY	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up.	0090001012
Greater Geelong City Council	MOOLAP	132 - 140 HAYS RD	Current Industrial Site. Requires assessment and/or clean up.	0090008940
Greater Geelong City Council	MOOLAP	132 - 140 HAYS RD	Current Industrial Site. Requires ongoing management.	0090009865

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Greater Geelong City Council	NORLANE	5 - 19 PRINCES HWY	Former Industrial Site. Requires assessment and/or clean up.	0090004126
Greater Geelong City Council	NORLANE	60 - 80 NORTH SHORE RD	Current Industrial Site. Requires assessment and/or clean up.	0090004132
Greater Geelong City Council	NORTH GEELONG	343 - 363 MELBOURNE RD	Former Industrial Site. Requires assessment and/or clean up.	0090004124
Greater Geelong City Council	POINT HENRY	420 Point Henry RD	Contaminated soil is retained and managed onsite. Requires ongoing management.	0090008914
Greater Geelong City Council	POINT HENRY	420 Point Henry RD	Former Industrial Site. Requires assessment and/or clean up.	0090009457
Greater Shepparton City Council	COSGROVE	205 COSGROVE-LEMNOS RD	Former Landfill. Requires ongoing management.	0090006807
Greater Shepparton City Council	MURCHISON	310 WOOLSHED RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009822
Greater Shepparton City Council	SHEPPARTON EAST	40 BOUNDARY RD	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up.	0090009886
Greater Shepparton City Council	SHEPPARTON EAST	35 SWAINSTON RD	Illegal dumping. Requires ongoing management.	0090010065
Greater Shepparton City Council	SHEPPARTON NORTH	280 Daldy RD	Former Industrial Site. Requires assessment and/or clean up.	0090001776
Hepburn Shire Council	CRESWICK	C/A45a Section 48A Township of Creswick Parish of Creswick	Former Landfill. Requires ongoing management.	0090006899
Hepburn Shire Council	DAYLESFORD	47 RAGLAN ST	Current Service Station. Requires ongoing management.	0090008622
Hepburn Shire Council	TRENTHAM	10 STATION ST	Current Industrial Site. Requires assessment and/or clean up.	0090008722
Hobsons Bay City Council	ALTONA	401 - 435 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up.	0090003368
Hobsons Bay City Council	ALTONA	541 - 583 Kororoit Creek RD	Current Industrial Site. Requires assessment and/or clean up.	0090005374
Hobsons Bay City Council	ALTONA	25 LINNET ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090006781
Hobsons Bay City Council	ALTONA	351 - 381 MILLERS RD	Current Industrial Site. Requires ongoing management.	0090007005
Hobsons Bay City Council	ALTONA	351 - 381 MILLERS RD	Current petroleum storage site. Requires ongoing management.	0090008552
Hobsons Bay City Council	ALTONA	471 - 513 KOROROIT CREEK RD	Current Industrial Site. Requires assessment and/or clean up.	0090009008
Hobsons Bay City Council	ALTONA MEADOWS	306 - 316 QUEEN ST	Current Service Station. Requires ongoing management.	0090006760
Hobsons Bay City Council	ALTONA NORTH	40 - 68 KYLE RD	Former Landfill. Requires ongoing management.	0090003527
Hobsons Bay City Council	ALTONA NORTH	400 - 498 Grieve PDE	Current Industrial Site. Requires assessment and/or clean up.	0090008356
Hobsons Bay City Council	ALTONA NORTH	2 NEW ST	Former Industrial Site. Requires assessment and/or clean up.	0090009060
Hobsons Bay City Council	BROOKLYN	Hardie RD	Former Landfill. Requires ongoing management.	0090003487
Hobsons Bay City Council	BROOKLYN	21 Paw Paw RD	Current Industrial Site. Requires assessment and/or clean up.	0090009632
Hobsons Bay City Council	NEWPORT	411 DOUGLAS PDE	Current petroleum storage site. Requires assessment and/or clean up.	0090006881
Hobsons Bay City Council	NEWPORT	Underground Section Of Petroleum Pipelines That Run Under Champion Rd	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up.	0090006968
Hobsons Bay City Council	SPOTSWOOD	144 - 150 HALL ST	Current Industrial Site. Requires assessment and/or clean up.	0090003301
Hobsons Bay City Council	SPOTSWOOD	512 - 578 Melbourne RD	Railway yard. Requires ongoing management.	0090005636
Hobsons Bay City Council	SPOTSWOOD	39 - 81 BURLEIGH ST	Current Industrial Site. Requires ongoing management.	0090008619
Hobsons Bay City Council	YARRAVILLE	29 FRANCIS STREET	Current petroleum storage site. Requires ongoing management.	0090007570

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Horsham Rural City Council	Horsham	Lot 1 TP894637 Parish of Horsham	Former petroleum storage site. Requires assessment and/or clean up.	0090009145
Horsham Rural City Council	HORSHAM	15 - 17 MILL ST	Former petroleum storage site. Requires assessment and/or clean up.	0090009146
Horsham Rural City Council	Longerenong	Corner of West and Centre Roads	Current Industrial Site. Requires assessment and/or clean up.	0090007170
Hume City Council	ATTWOOD	7 SAINSBURY CT	Illegal dumping. Requires assessment and/or clean up.	0090008272
Hume City Council	BULLA	315 Loemans RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090000177
Hume City Council	BULLA	500 SUNBURY RD	Current landfill. Requires ongoing management.	0090008885
Hume City Council	CAMPBELLFIELD	1735 Sydney RD	Current Industrial Site. Requires assessment and/or clean up.	0090002373
Hume City Council	CAMPBELLFIELD	468 - 472 MAHONEYS RD	Former Landfill. Requires ongoing management.	0090003496
Hume City Council	CAMPBELLFIELD	1-71 & 2-70 BOLINDA RD	Former Landfill. Requires ongoing management.	0090007850
Hume City Council	CAMPBELLFIELD	1735 Sydney RD	Current Industrial Site. Requires assessment and/or clean up.	0090008237
Hume City Council	CAMPBELLFIELD	166 Northbourne RD	Current Industrial Site. Requires assessment and/or clean up.	0090008413
Hume City Council	CAMPBELLFIELD	16 - 18 THORNYCROFT ST	Current chemical storage facility. Requires assessment and/or clean up.	0090009826
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management.	0090003107
Hume City Council	CRAIGIEBURN	Craigieburn RD	Former Landfill. Requires ongoing management.	0090003475
Hume City Council	DIGGERS REST	205 BULLA-DIGGERS REST RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090007300
Hume City Council	Greenvale	Mitchell Lasry Quarry 555 Mickleham Road	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090007757
Hume City Council	KEILOR	145 Annandale RD	Former Landfill. Requires ongoing management.	0090007798
Hume City Council	MELBOURNE AIRPORT	206 - 300 WESTERN AV	Former Landfill. Requires ongoing management.	0090004621
Hume City Council	SOMERTON	70 CLIFFORDS RD	Current Industrial Site. Requires ongoing management.	0090007724
Hume City Council	SUNBURY	45 - 55 DEVERALL RD	Illegal dumping. Requires assessment and/or clean up.	0090005274
Hume City Council	SUNBURY	53 - 55 HORNE ST	Current Service Station. Requires assessment and/or clean up.	0090009620
Hume City Council	WILDWOOD	275 KONAGADERRA RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090006247
Kingston City Council	ASPENDALE	105 NEPEAN HWY	Former Service Station. Requires assessment and/or clean up.	0090009807
Kingston City Council	CHELSEA	84 - 130 THAMES PROM	Former Landfill. Requires ongoing management.	0090003613
Kingston City Council	Cheltenham	2-6 Railway Road	Former Industrial Site. Requires ongoing management.	0090008070
Kingston City Council	CHELTENHAM	1228 NEPEAN HWY	Former Industrial Site. Requires ongoing management.	0090009112
Kingston City Council	CHELTENHAM	5 - 13 ELMA RD	Current Industrial Site. Requires assessment and/or clean up.	0090009240
Kingston City Council	CLARINDA	3 VICTORY RD	Former Landfill. Requires assessment and/or clean up.	0090009633
Kingston City Council	CLAYTON SOUTH	8 Elder ST	Former Landfill. Requires ongoing management.	0090003610
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD	Former Landfill. Requires ongoing management.	0090006972
Kingston City Council	CLAYTON SOUTH	654 - 718 CLAYTON RD	Former Landfill. Requires ongoing management.	0090007014
Kingston City Council	CLAYTON SOUTH	Cnr Clayton & Ryans RDS	Former Landfill. Requires ongoing management.	0090007125
Kingston City Council	CLAYTON SOUTH	FRASER RD	Former Landfill. Requires assessment and/or clean up.	0090007756
Kingston City Council	CLAYTON SOUTH	FRASER RD	Former Landfill. Requires ongoing management.	0090008726
Kingston City Council	CLAYTON SOUTH	623-633 HEATHERTON ROAD, CLAYTON SOUTH VIC 3169	Former Landfill. Requires ongoing management.	0090008747
Kingston City Council	CLAYTON SOUTH	1486 - 1550 CENTRE RD	Former Industrial Site. Requires ongoing management.	0090009073

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Kingston City Council	CLAYTON SOUTH	RYANS and DEALS RD	Former Landfill. Requires ongoing management.	0090009103
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD	Former Landfill. Requires ongoing management.	0090009156
Kingston City Council	CLAYTON SOUTH	Cnr Deals RD & Heatherton RD	Former Landfill. Requires assessment and/or clean up.	0090009157
Kingston City Council	CLAYTON SOUTH	623-633 HEATHERTON ROAD, CLAYTON SOUTH VIC 3169	Former Landfill. Requires ongoing management.	0090009813
Kingston City Council	DINGLEY	370 - 418 Old Dandenong RD	Former Landfill. Requires ongoing management.	0090008100
Kingston City Council	Dingley Village	Spring Road & Rowan Road DINGLEY VILLAGE VIC 3172	Former Landfill. Requires ongoing management.	0090007189
Kingston City Council	DINGLEY VILLAGE	Spring Road & Rowan Road DINGLEY VILLAGE VIC 3172	Former Landfill. Requires assessment and/or clean up.	0090003857
Kingston City Council	HEATHERTON	16 BALL RD	Former Landfill. Requires ongoing management.	0090008425
Kingston City Council	HEATHERTON	Crn Henry Street and Old Dandenong Road	Former Landfill. Requires ongoing management.	0090008924
Kingston City Council	HEATHERTON	Crn Henry Street and Old Dandenong Road	Former Landfill. Requires assessment and/or clean up.	0090009102
Kingston City Council	HEATHERTON	91 - 185 KINGSTON RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up.	0090009562
Kingston City Council	MOORABBIN	1 10 Ebden ST	Former Industrial Site. Requires ongoing management.	0090002273
Kingston City Council	OAKLEIGH SOUTH	19-71 CARROLL RD	Former Landfill. Requires ongoing management.	0090007021
Kingston City Council	OAKLEIGH SOUTH	19-71 CARROLL RD	Former Landfill. Requires ongoing management.	0090009170
Knox City Council	BAYSWATER	836 Mountain HWY	Current chemical storage facility. Requires assessment and/or clean up.	0090009209
Knox City Council	ROWVILLE	1215 STUD RD	Current Service Station. Requires assessment and/or clean up.	0090010080
Knox City Council	WANTIRNA	750 BORONIA RD	Illegal dumping. Requires assessment and/or clean up.	0090008817
Knox City Council	WANTIRNA SOUTH	1180 HIGH STREET RD 251 GEORGE ST	Former Landfill. Requires ongoing management.	0090006480
Knox City Council	WANTIRNA SOUTH	14 COPPELIA ST	Former Landfill. Requires ongoing management.	0090007017
Latrobe City Council	HAZELWOOD	HAZELWOOD POWER COMPLEX BRODRIBB RD	Former Industrial Site. Requires assessment and/or clean up.	0090009548
Latrobe City Council	HAZELWOOD	HAZELWOOD POWER COMPLEX BRODRIBB RD	Former Industrial Site. Requires assessment and/or clean up.	0090009862
Latrobe City Council	HAZELWOOD	HAZELWOOD POWER COMPLEX BRODRIBB RD	Former Industrial Site. Requires assessment and/or clean up.	0090009863
Latrobe City Council	HAZELWOOD	HAZELWOOD POWER COMPLEX BRODRIBB RD	Former Industrial Site. Requires assessment and/or clean up.	0090009864
Latrobe City Council	Hazelwood North	Lot 2, PS533418 Monash Way	Illegal dumping. Requires assessment and/or clean up.	0090008833
Latrobe City Council	Hernes Oak	SPI : 9L\PP3273 PFI : 52587509	Former Landfill. Requires ongoing management.	0090007200
Latrobe City Council	MORWELL	Lot RES1 PS449978 MARYVALE ROAD	Former Landfill. Requires ongoing management.	0090007555
Latrobe City Council	MORWELL	145 - 147 PRINCES DR	Former Service Station. Requires assessment and/or clean up.	0090008958
Latrobe City Council	MORWELL	412 COMMERCIAL RD	Former Industrial Site. Requires assessment and/or clean up.	0090010035
Latrobe City Council	TRARALGON	115 PRINCES ST	Current Service Station. Requires assessment and/or clean up.	0090009719
Latrobe City Council	TRARALGON SOUTH	Loy Yang B3/4 Bartons Lane	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management.	0090002894
Latrobe City Council	YALLOURN	EASTERN RD	Current Industrial Site. Requires ongoing management.	0090009097
Loddon Shire Council	BEARS LAGOON	15 DALZIELS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090010017
Loddon Shire Council	YARRAWALLA	413 YARRAWALLA WEST RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090010146
Macedon Ranges Shire Council	BULLENGAROOK	531 Hobbs RD	Former Landfill. Requires ongoing management.	0090006708
Macedon Ranges Shire Council	GISBORNE	9 STATION RD	Former petroleum storage site. Requires assessment and/or clean up.	0090008336

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Macedon Ranges Shire Council	KYNETON	Redesdale (Lot 24D\PP2979) RD	Former Landfill. Requires ongoing management.	0090006370
Macedon Ranges Shire Council	KYNETON	2 PIPER ST	Former Service Station. Requires ongoing management.	0090009675
Macedon Ranges Shire Council	LANCEFIELD	Baynton (Lot 16 LP208950) RD	Former Landfill. Requires ongoing management.	0090005294
Macedon Ranges Shire Council	ROMSEY	2 33 MAIN ST	Current Service Station. Requires assessment and/or clean up.	0090005361
Manningham City Council	PARK ORCHARDS	20 - 26 STINTONS RD	Illegal dumping. Requires assessment and/or clean up.	0090005987
Manningham City Council	PARK ORCHARDS	20 - 26 STINTONS RD	Illegal dumping. Requires assessment and/or clean up.	0090005988
Manningham City Council	PARK ORCHARDS	20 - 26 STINTONS RD	Illegal dumping. Requires assessment and/or clean up.	0090005989
Manningham City Council	PARK ORCHARDS	20 - 26 STINTONS RD	Illegal dumping. Requires assessment and/or clean up.	0090006690
Mansfield Shire Council	MANSFIELD	Monkey Gully RD	Former Landfill. Requires ongoing management.	0090007633
Maribyrnong City Council	3012	1 AMANDA RD TOTTENHAM	Current chemical storage facility. Requires ongoing management.	0090009424
Maribyrnong City Council	BRAYBROOK	30 - 38 SOUTH RD	Current Industrial Site. Requires assessment and/or clean up.	0090007873
Maribyrnong City Council	FOOTSCRAY	LOTS 1 AND 2 ON TITLE PLAN 606602F (FARNSWORTH AVE)	Former Landfill. Requires ongoing management.	0090008310
Maribyrnong City Council	MAIDSTONE	9 - 15 WILLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up.	0090003767
Maribyrnong City Council	MAIDSTONE	9 - 15 WILLIAMSON RD	Former Industrial Site. Requires assessment and/or clean up.	0090009654
Maribyrnong City Council	TOTTENHAM	550 GEELONG RD	Former Industrial Site. Requires assessment and/or clean up.	0090002056
Maribyrnong City Council	TOTTENHAM	550 GEELONG RD	Illegal dumping. Requires assessment and/or clean up.	0090004455
Maribyrnong City Council	TOTTENHAM	420 SOMERVILLE RD	Illegal dumping. Requires assessment and/or clean up.	0090009653
Maribyrnong City Council	WEST FOOTSCRAY	1 - 19 Graingers RD	Former chemical storage facility. Requires assessment and/or clean up.	0090006322
Maribyrnong City Council	YARRAVILLE	1 - 3 High ST	Former Industrial Site. Requires ongoing management.	0090000134
Maribyrnong City Council	YARRAVILLE	221 Whitehall ST	Former Industrial Site. Requires ongoing management.	0090003331
Maribyrnong City Council	YARRAVILLE	325 WHITEHALL STREET	Former Industrial Site. Requires assessment and/or clean up.	0090006664
Maribyrnong City Council	YARRAVILLE	325 WHITEHALL STREET	Former Industrial Site. Requires assessment and/or clean up.	0090008694
Maribyrnong City Council	YARRAVILLE	2A FRANCIS ST	Former Industrial Site. Requires assessment and/or clean up.	0090009551
Maroondah City Council	RINGWOOD EAST	18 Mount Dandenong RD	Current Service Station. Requires ongoing management.	0090008258
Melbourne City Council	CARLTON	46-78 Bouverie Street 185-195 Queensberry Street	Former Industrial Site. Requires assessment and/or clean up.	0090008725
Melbourne City Council	CARLTON	46-78 Bouverie Street 185-195 Queensberry Street	Former Industrial Site. Requires assessment and/or clean up.	0090008997
Melbourne City Council	KENSINGTON	71 - 89 HOBSONS RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up.	0090007064
Melbourne City Council	Melbourne	447 Collins Street	Accidental spill/leak (non-industrial site). Requires assessment and/or clean up.	0090008808
Melbourne City Council	PORT MELBOURNE	2 WEST GATE FWY	Current Service Station. Requires assessment and/or clean up.	0090007492
Melbourne City Council	PORT MELBOURNE	1 WEST GATE FWY	Current Service Station. Requires assessment and/or clean up.	0090007721
Melbourne City Council	TRUGANINA	8 Nicholson Street East Melbourne	Former Landfill. Requires ongoing management.	0090009751
Melton Shire Council	COBBLEBANK	28 - 52 FERRIS RD	Former Landfill. Requires ongoing management.	0090005053

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Melton Shire Council	COBBLEBANK	43 - 67 FERRIS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090008182
Melton Shire Council	PLUMPTON	627 - 703 PLUMPTON RD	Solid inert waste has been dumped at the site. Requires assessment and/or clean up.	0090003893
Melton Shire Council	PLUMPTON	627 - 703 PLUMPTON RD	Illegal dumping. Requires assessment and/or clean up.	0090004146
Melton Shire Council	RAVENHALL	714 Christies Road and 227 Riding Boundary Road RIDING BOUNDARY ROAD	Current landfill. Requires ongoing management.	0090009120
Mildura Rural City Council	KOORLONG	Twentieth ST	Former Landfill. Requires ongoing management.	0090005267
Mildura Rural City Council	KOORLONG	153 (LOT 1\TP390223) TWENTY FOURTH ST	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090008389
Mildura Rural City Council	KOORLONG	4463 BENETOOK AV	Solid inert waste has been dumped at the site. Requires assessment and/or clean up.	0090009260
Mildura Rural City Council	MILDURA	220 - 222 TENTH ST	Former petroleum storage site. Requires assessment and/or clean up.	0090005846
Mildura Rural City Council	MILDURA	211 - 217 NINTH ST	Former petroleum storage site. Requires ongoing management.	0090009396
Mildura Rural City Council	OUYEN	52 - 56 FARRELL (CA19 SECTION 3\PP5621) ST	Former petroleum storage site. Requires ongoing management.	0090007130
Mildura Rural City Council	WERRIMULL	ALLOTMENT 5 PARISH OF MURRNROONG KING STREET	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009110
Mitchell Shire Council	BROADFORD	High ST	Former Landfill. Requires ongoing management.	0090003542
Mitchell Shire Council	SEYMOUR	Lot 1\TP41415 HUME AND HOVELL ROAD	Former Landfill. Requires ongoing management.	0090007542
Mitchell Shire Council	SEYMOUR	117 WIMBLE ST	Former chemical storage facility. Requires assessment and/or clean up.	0090009130
Mitchell Shire Council	Wallan East	LOT Z PS 818938 Newbridge Subdivision	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009466
Moira Shire Council	NUMURKAH	Parish Of Katunga C/a 14 Sect D Naring Rd	Former Landfill. Requires ongoing management.	0090007551
Moira Shire Council	YARRAWONGA	81 Channel RD	Former Landfill. Requires ongoing management.	0090008056
Monash City Council	CLAYTON	1555 - 1615 CENTRE RD	Current Industrial Site. Requires assessment and/or clean up.	0090009962
Monash City Council	GLEN WAVERLEY	310 - 336 SPRINGVALE RD	Current Industrial Site. Requires ongoing management.	0090006390
Monash City Council	OAKLEIGH EAST	108 - 112 FERNTREE GULLY RD	Former Landfill. Requires ongoing management.	0090006175
Moonee Valley City Council	ASCOT VALE	556 MT ALEXANDER RD	Current Service Station. Requires ongoing management.	0090007960
Moorabool Shire Council	FISKVILLE	4549 Geelong-Ballan RD	Former Industrial Site. Requires assessment and/or clean up.	0090009541
Moorabool Shire Council	FISKVILLE	4549 Geelong-Ballan RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up.	0090009700
Moorabool Shire Council	MADDINGLEY	1 PS908919 Side Of Kerrs RD	Former Landfill. Requires ongoing management.	0090003631
Moreland City Council	Brunswick	225 and 227-231 Barkly Street	Former Industrial Site. Requires ongoing management.	0090004362
Moreland City Council	BRUNSWICK	225 and 227-231 Barkly Street	Former Industrial Site. Requires ongoing management.	0090004520
Moreland City Council	BRUNSWICK	699-701 PARK STREET, 2-4 SYDNEY ROAD 182, 184-186, 188 AND 190-192 BRUNSWICK	Former Industrial Site. Requires assessment and/or clean up.	0090008501
Moreland City Council	BRUNSWICK EAST	4 - 6 BARKLY ST	Former Industrial Site. Requires assessment and/or clean up.	0090009126
Moreland City Council	COBURG NORTH	46 - 54 Newlands RD	Current Service Station. Requires ongoing management.	0090009742
Mornington Peninsula Shire Council	CRIB POINT	2 Lens ST	Former Landfill. Requires ongoing management.	0090003619
Mornington Peninsula Shire Council	DROMANA	107 - 109 POINT NEPEAN RD	Current petroleum storage site. Requires assessment and/or clean up.	0090008942
Mornington Peninsula Shire Council	HASTINGS	33 CEMETERY RD	Current Industrial Site. Requires assessment and/or clean up.	0090007389

PRIORITY SITES REGISTER

Information as at 30 June 2019

Municipality	Suburb	Address	Issue	Notice Number
Mornington Peninsula Shire Council	MOUNT ELIZA	254-450 MOOROODUC HWY	Former Landfill. Requires ongoing management.	0090000477
Mornington Peninsula Shire Council	MOUNT ELIZA	254-450 MOOROODUC HWY	Former Landfill. Requires ongoing management.	0090003744
Mornington Peninsula Shire Council	RED HILL	87 Arthurs Seat RD	Current Service Station. Requires assessment and/or clean up.	0090009981
Mornington Peninsula Shire Council	ROSEBUD WEST	119 Truemans RD	Former Landfill. Requires ongoing management.	0090003616
Mornington Peninsula Shire Council	ROSEBUD WEST	119 Truemans RD	Former Landfill. Requires ongoing management.	0090009426
Mornington Peninsula Shire Council	TUERONG	435 BALNARRING RD	Current landfill. Requires ongoing management.	0090007893
Mount Alexander Shire Council	Castlemaine	74 Tomkies Road Lane	Contaminated soil is retained and managed onsite. Requires ongoing management.	0090004156
Moyne Shire Council	ALLANSFORD	5331 Great Ocean RD	Current Industrial Site. Requires ongoing management.	0090004322
Moyne Shire Council	PORT FAIRY	Badhams LANE	Former Landfill. Requires ongoing management.	0090003625
Nillumbik Shire Council	KANGAROO GROUND	105 GRAHAM RD	Former Landfill. Requires ongoing management.	0090007781
Nillumbik Shire Council	YARRAMBAT	290 - 304 Yan Yean RD	Former Landfill. Requires ongoing management.	0090007767
Northern Grampians Shire Council	Stawell	Crown Allotment 136K Parish of Illawarra	Industrial waste has been dumped at the site. Requires ongoing management.	0090006260
Northern Grampians Shire Council	Stawell	Crown Allotment 136K Parish of Illawarra	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090006261
Northern Grampians Shire Council	Stawell	TSF2 ,CA1 Sec5,CA4 Sec5, CA5 Sec5 CA6 Sec5, CA18V Sec2, CA18W Sec2,	Historical deposit of mine tailings. Requires ongoing management.	0090009616
Port Phillip City Council	PORT MELBOURNE	337 WILLIAMSTOWN RD	Former petroleum storage site. Requires assessment and/or clean up.	0090008757
South Gippsland Shire Council	AGNES	614 BARRY RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009029
South Gippsland Shire Council	FOSTER	4090 SOUTH GIPPSLAND HWY	Former Landfill. Requires ongoing management.	0090008734
South Gippsland Shire Council	LEONGATHA SOUTH	630 ROUGHEADS RD	Former Landfill. Requires ongoing management.	0090006475
Strathbogie Shire Council	VIOLET TOWN	190 Mcdiarmids RD	Former Landfill. Requires ongoing management.	0090008902
Surf Coast Shire Council	ANGLESEA	CAMP RD	Former Industrial Site. Requires assessment and/or clean up.	0090006380
Surf Coast Shire Council	Winchelsea	84 Hopkins Street CA 33 Township of Winchelsea	Gun, pistol or rifle range. Requires assessment and/ or clean up.	0090008921
Surf Coast Shire Council	Winchelsea	84 Hopkins Street CA 33 Township of Winchelsea	Gun, pistol or rifle range. Requires assessment and/ or clean up.	0090008985
Swan Hill Rural City Council	Swan Hill	3 Hastings Street	Former petroleum storage site. Requires assessment and/or clean up.	0090006980
Towong Shire Council	BETHANGA	4 MARTIN ST	Former Landfill. Requires ongoing management.	0090003554
Wangaratta Rural City Council	WANGARATTA SOUTH	99 SHANLEY ST	Current Industrial Site. Requires assessment and/or clean up.	0090007165
Warrnambool City Council	WARRNAMBOOL	Braithwaite ST	Former Landfill. Requires ongoing management.	0090007563
Wellington Shire Council	KILMANY	Lot 1 & Part Lot 2 LP79840 Parish of Wooun Dellah	Current landfill. Requires ongoing management.	0090009815
Wellington Shire Council	LONGFORD	GARRETTS RD	Current Industrial Site. Requires assessment and/or clean up.	0090008496
Wellington Shire Council	LONGFORD	GARRETTS RD	Current Industrial Site. Requires assessment and/or clean up.	0090008551
Wellington Shire Council	MAFFRA	95 SELLINGS RD	Current landfill. Requires ongoing management.	0090009831
Wellington Shire Council	SALE	2-14 McMillan Street	Former Industrial Site. Requires assessment and/or clean up.	0090009164
Wellington Shire Council	TRARALGON	Loy Yang Switchyard Bartons LANE	Ash pond with a Groundwater Attenuation Zone. Requires ongoing management.	0090002893
Wellington Shire Council	WEST SALE	Cnr Princes Highway and Sale-Cowarr Road	Current Industrial Site. Requires ongoing management.	0090007151

PRIORITY SITES REGISTER

Information as at 30 June 2019

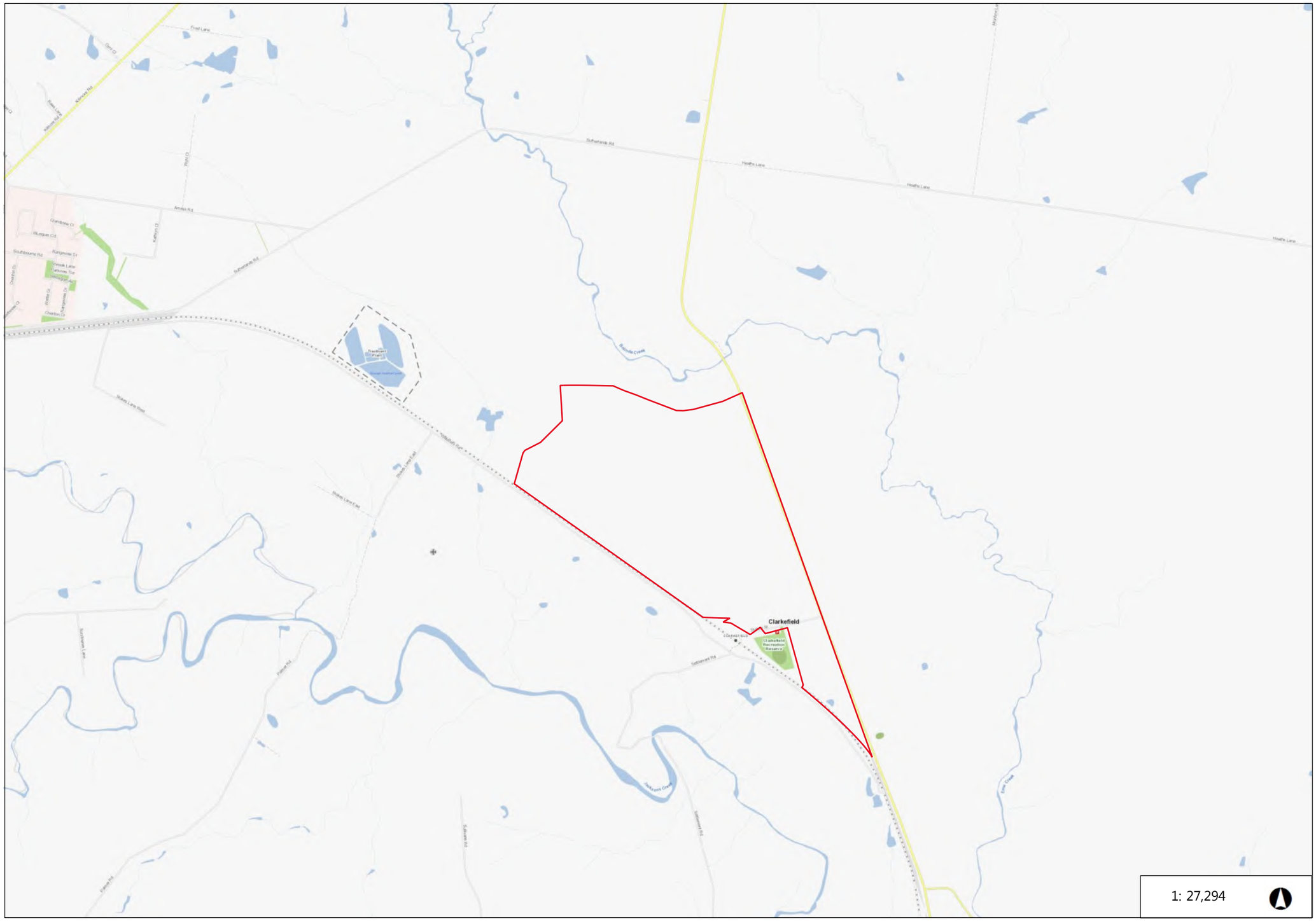
Municipality	Suburb	Address	Issue	Notice Number
Wellington Shire Council	YARRAM	5507 HYLAND HWY	Former Landfill. Requires ongoing management.	0090003055
West Wimmera Shire Council	PATYAH	VOLUME 09918 FOLIO 873 CROWN ALLOTMENT 105	Illegal dumping. Requires assessment and/or clean up.	0090010062
Whitehorse City Council	BOX HILL	14 Federation ST	Former Landfill. Requires ongoing management.	0090003499
Whittlesea City Council	EPPING	500 Cooper ST	Former Landfill. Requires ongoing management.	0090003490
Whittlesea City Council	EPPING	490 COOPER ST	Former Landfill. Requires ongoing management.	0090003502
Whittlesea City Council	THOMASTOWN	15 INDUSTRIAL AV	Illegal dumping. Requires assessment and/or clean up.	0090007144
Whittlesea City Council	THOMASTOWN	338 - 342 SETTLEMENT RD	Former petroleum storage site. Requires ongoing management.	0090007336
Whittlesea City Council	WHITTLESEA	125 HOLTS RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090006944
Whittlesea City Council	WOLLERT	585 SUMMERHILL RD	Contaminated soil is retained and managed onsite. Requires assessment and/or clean up.	0090009575
Wodonga Rural City Council	WODONGA	3437 Beechworth-Wodonga RD	Former Landfill. Requires ongoing management.	0090003548
Wodonga Rural City Council	WODONGA	CARROLLS LANE LOT 1TP423757	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090008268
Wodonga Rural City Council	WODONGA	CARROLLS LANE LOT 1TP423757	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009546
Wyndham City Council	LAVERTON NORTH	65 LEAKES RD	Current Industrial Site. Requires assessment and/or clean up.	0090006945
Wyndham City Council	LAVERTON NORTH	103 - 105 Pipe RD	Current Industrial Site. Requires assessment and/or clean up.	0090007881
Wyndham City Council	LAVERTON NORTH	19 LITTLE BOUNDARY RD	Current Industrial Site. Requires ongoing management.	0090008784
Wyndham City Council	LAVERTON NORTH	25 LITTLE BOUNDARY RD	Current Industrial Site. Requires assessment and/or clean up.	0090009011
Wyndham City Council	LAVERTON NORTH	47 - 61 Fitzgerald RD	Current Industrial Site. Requires assessment and/or clean up.	0090009388
Wyndham City Council	LAVERTON NORTH	88 - 90 WILLIAM ANGLISS DR	Current Industrial Site. Requires assessment and/or clean up.	0090009686
Wyndham City Council	LITTLE RIVER	490 EDGARS RD	Illegal dumping. Requires assessment and/or clean up.	0090004276
Wyndham City Council	TRUGANINA	191 LEAKES RD	Industrial waste has been dumped at the site. Requires assessment and/or clean up.	0090009338
Yarra City Council	FITZROY NORTH	Crown Allotments 2025, A5 & A7, Parish of Jika Jika	Former Industrial Site. Requires ongoing management.	0090004363
Yarra Ranges Shire Council	KILSYTH	2 76 Fussell RD	Former Industrial Site. Requires assessment and/or clean up.	0090009524

APPENDIX C

Historical Records

Victoria Unearthed

EAO's, EPA Audits, GRUZ and Landfills



Legend

- Victorian Landfill Register Point
  - Closed
  - Operating
- Victorian Landfill Register Areas
  - Closed
  - Operating
- EPA Audit Points
- EPA Audit Areas
- Groundwater Restricted Use Point
- Env. Audit Overlays

1,387 0 693 1,387 Metres

GDA_1994_VICGRID94

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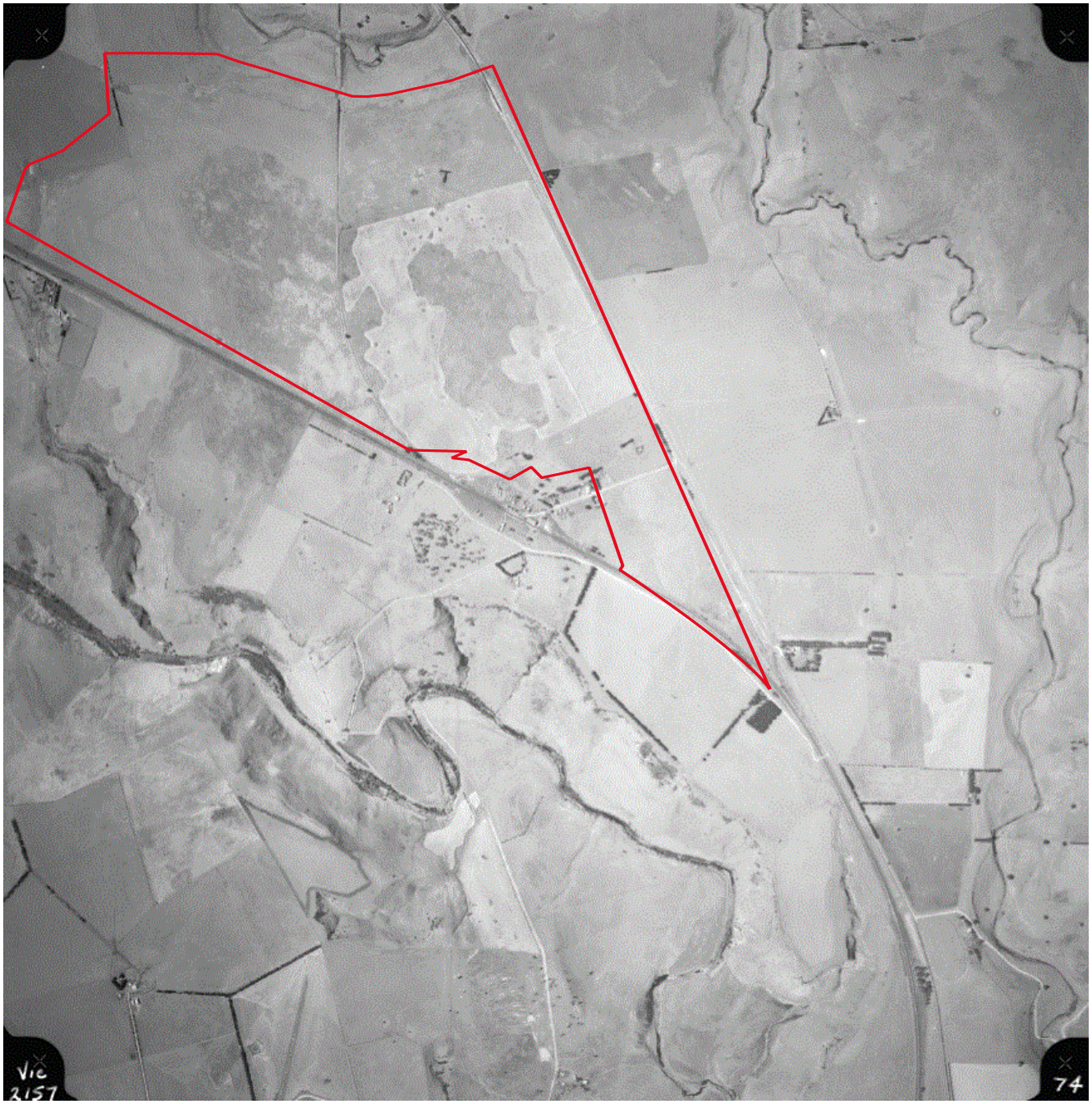
Map Created on **22-Jul-2019 2:40 PM**

Aerial Photo 1968

Project: **1788 Clarkefield**



Atma Environmental

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**1968**

Aerial Photo 1969

Project: **1788 Clarkefield**

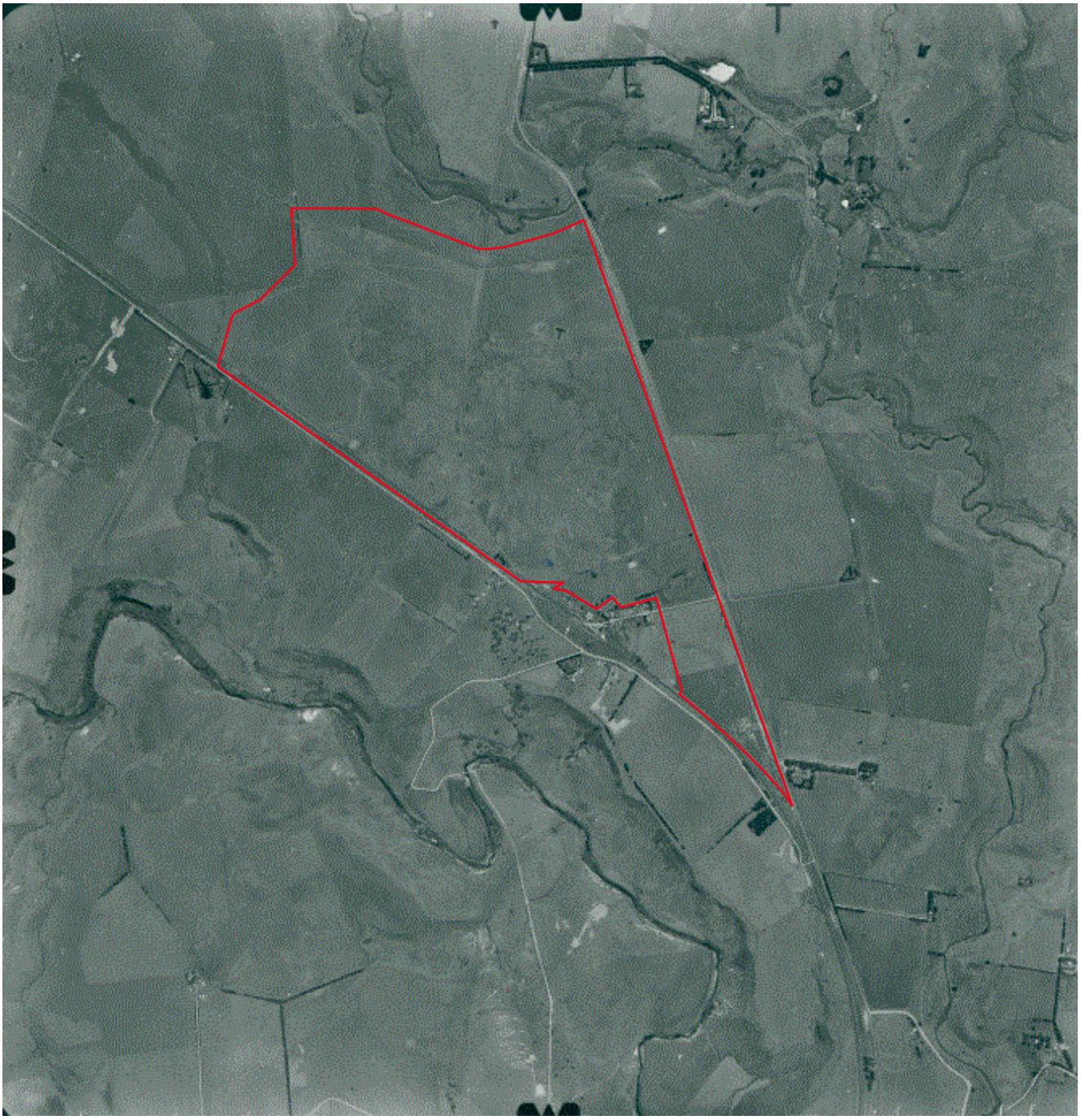
Atma Environmental

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**1969**

Aerial Photo 1971

Project: **1788 Clarkefield**



Atma Environmental

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**1971**

Aerial Image 1984

Project: **1788**

N

Atma Environmental

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**1984**

Aerial Photo 2012

Project: **1788 Clarkefield**

Atma Environmental

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2012**

Aerial Image 2012

Project: **1788**

N

Atma *Environmental*

Site Boundary

Source:	**Near Map**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2012**

Aerial Image 2015

Project: **1788**

N

Atma Environmental

Site Boundary

Source:	**Google Earth**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2015**

Aerial Image 2015

Project: **1788**

N

Atma Environmental

Site Boundary

Source:	**Google Earth**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2015**

Aerial Image 2019

Project: **1788**

N

Atma *Environmental*

Site Boundary

Source:	**Landata**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2019**

Aerial Image 2019

Project: **1788**

N

Atma Environmental

Site Boundary

Source:	**Near Map**
Project:	**n/a**
Run:	**n/a**
Scale:	**n/a**
Date:	**2019**

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RECORD OF HISTORICAL DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
18/01/2018	18/01/2018	AQ648325V (E)	N

CAVEAT
CAVEAT AQ648325V 18/01/2018
Caveator
MELBOURNE-LANCEFIELD ROAD LAND INVESTMENTS PTY LTD
Grounds of Claim
CHARGE CONTAINED IN AN AGREEMENT WITH THE FOLLOWING PARTIES AND DATE.
Parties
THE REGISTERED PROPRIETOR(S)
Date
14/12/2017
Estate or Interest
INTEREST AS CHARGEE
Prohibition
ABSOLUTELY
Lodged by
MADGWICKS
Notices to
LAURANCE DAVIS of LEVEL 6 140 WILLIAM STREET MELBOURNE VIC 3000

STATEMENT END

VOTS Snapshot

VOLUME 08466 FOLIO 275
124069974151T
Produced 18/01/2018 03:26 pm

LAND DESCRIPTION

Lot 1 on Title Plan 330358A (formerly known as part of Parish of Kerrie).
PARENT TITLE Volume 03500 Folio 949

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Created by instrument B741935 03/09/1963

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
RUPERT CLARKE & CO. PTY LTD of "BOLINDA VALE" CLARKEFIELD
F983912 29/12/1975

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP330358A FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

8466/275 - Version 0, Date 14/12/1999

Delivered by LANDATA®. Land Use Victoria timestamp 24/07/2019 10:05 Page 1 of 2

ORIGINAL

NOT TO BE TAKEN FROM THE OFFICE OF TITLES

VICTORIA

REGISTER BOOK

VOL. 8466 FOL. 275

Certificate of Title

UNDER THE "TRANSFER OF LAND ACT"

VOL. 8466 FOL. 275

KELVIN JOHN CARDILLO of Sunbury Farmer is now the proprietor of an estate in fee simple subject to the encumbrances notified hereunder in ALL THOSE pieces of land delineated and coloured red on the map in the margin containing Twenty-three acres Three roods and Nine perches or - thereabouts being part of W.J.T. Clarke's Crown Special Survay Parish of Kerrie -

DATED the 3rd day of September 1963.

L. G. McIntosh

OFFICE OF TITLES VICTORIA

Assistant Registrar of Titles

ENCUMBRANCES REFERRED TO

MEASUREMENTS ARE IN LINKS

Derived from Vol.3500 Fol.949
B741935.

Delivered by LANDATA®. Land Use Victoria timestamp 24/07/2019 10:05 Page 2 of 2

MORTGAGE to AUSTRALIA AND NEW ZEALAND BANK LIMITED

Registered 6th July 1966

No.C531853

DISCHARGED 20 OCT 1970

OFFICE OF TITLES D.K. VICTORIA

CAVEAT No. 2 LODGED 14 OCT 1970

OFFICE OF TITLES K.L.K. VICTORIA

OFFICE OF TITLES A.W.B. VICTORIA

OFFICE OF TITLES A.D.G. VICTORIA

CAVEAT LAPSED 27 JAN 1976

RUPERT CLARKE & CO. PROPRIETARY LIMITED of "Bolinda Vale" Clarkefield is now the proprietor

Registered 29th December 1975

No.F983912

OFFICE OF TITLES A.S. VICTORIA

T08466-275-1-9

V8466 F275

APPENDIX D

Site Inspection Photographs

Rock stockpile

East portion of the site

Agricultural land use

Water bore in northern portion of site

Water tank to the north of the site

Water bore and tank to the north of site

Land facing south

North section of site

Old cutting for railway

Pipes near the north-west of site

South of land

Water trough

Land facing south-east

Historic train rails

Waste debris off-site to the south

Water tank in residential property, southern corner

Shed in southern corner

Water drains in concrete slab

Area of fill material

Asbestos found in southern corner

APPENDIX B

Site Photographs

1. Area north of Station St, looking Nth

2. Overgrown area east of dam in Sth section

3. Exploratory trench east of dam

4. Animal yards near house, looking east

5. Sth site section, looking south f Station St

6. Trace waste frag, historical house area

7. Existing house, looking south

8. Existing house, looking east

9. Wood waste, south side of dam

10. Approx location BH20, looking north

11. South section S end, looking north

12. Elongate stockpile, mid section, looking west

APPENDIX C

Soil Description Logs

Atma Environmental

Soil Bore: BH01

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 3

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH01/0.1	2.1	No odour/ACM, tile & brick fragments
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, saturated		0.4				No odour/ACM
			0.5		BH01/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH02

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 3

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH02/0.1		No odour/ACM, tile & brick fragments
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, saturated		0.4				No odour/ACM
			0.5		BH02/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH03

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 3

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH03/0.1	1.8	No odour/ACM, tile & brick fragments
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, saturated		0.3				No odour/ACM
			0.4				
			0.5		BH03/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH04

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 3

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH04/0.1		No odour/ACM, tile & brick fragments
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, saturated		0.3				No odour/ACM
			0.4				
			0.5		BH04/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH05

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 3

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH05/0.1		No odour/ACM, tile & brick fragments
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, saturated		0.3				No odour/ACM
			0.4				
			0.5		BH05/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH06

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH06/0.1	1.4	No odour/ACM DUP/SPLIT-240620A
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH06/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH07

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH07/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH07/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH08

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, light brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH08/0.1	1.9	No odour/ACM DUP/SPLIT-240620B
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown, high plasticity, soft - firm, dry		0.3				No odour/ACM
			0.4				
			0.5		BH08/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH09

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH09/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH09/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH10

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: -
Northing: -
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH10/0.1	2.2	No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				Trace amount of sand and gravels No odour/ACM
			0.4				
			0.5		BH10/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH11

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 5

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, light brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH11/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown, high plasticity, soft - firm, dry		0.3				No odour/ACM
			0.4				
			0.5		BH11/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH12

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, trace gravels, light brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH12/0.1	2.2	No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown, high plasticity, soft - firm, dry		0.3				Calcification of soil No odour/ACM
			0.4				
			0.5		BH12/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH13

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 5

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, light brown, low organic matter, medium - high plasticity, soft, dry		0.0				
0.1			0.1		BH13/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown, high plasticity, soft - firm, dry		0.3				No odour/ACM
			0.4				
			0.5		BH13/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH14

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 24/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	~~Ground Surface~~						
	FILL Silty GRAVEL, dark red, low organic matter, medium - coarse grained, very dense, damp		0.0				No odour/ACM
					BH14/0.1		
0.1	**NATURAL** Clayey SILT, brown, medium plasticity, soft, damp		0.1				No odour/ACM
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, yellowy brown/brown, medium - high plasticity, soft, damp		0.4				No odour/ACM
			0.5		BH14/0.5		
	End of Log		0.6				
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH15

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	DISTURBED NATURAL Clayey SILT, brown, low organic matter, medium plasticity, soft, moist		0.0				
					BH15/0.1		No odour/ACM
0.1	**FILL** Gravelly SILT, brown/grey brown, low plasticity, medium to coarse grained, firm, moist		0.1				No odour/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, dark brown/grey brown, high plasticity, firm, damp		0.5		BH15/0.5		No odour/ACM
	End of Log		0.6				
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH16

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 3

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium to high plasticity, soft, moist		0.0				
0.1			0.1		BH16/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, light brown, high plasticity, soft to firm, dry		0.3				No odour/ACM
			0.4				
			0.5		BH16/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH17

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 3

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH17/0.1	0.1	No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, light brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH17/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH18

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium to high plasticity, soft, moist		0.0				
0.1			0.1		BH18/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft to firm, damp		0.3				
			0.4				
			0.5		BH18/0.5		No odour/ACM
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH19

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	FILL Gravelly SILT, brown/grey brown, low plasticity, medium to coarse grained, firm, moist to saturated		0.0				
0.1			0.1		BH19/0.1		No odour/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, dark brown/grey brown, high plasticity, firm, damp		0.5		BH19/0.5		No odour/ACM
	End of Log		0.6				
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH20

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium to high plasticity, soft, moist		0.0				
0.1			0.1		BH20/0.1	0.1	No odour/ACM DUP/SPLIT-250620
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft to firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH20/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH21

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium to high plasticity, soft, moist		0.0				
0.1			0.1		BH21/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft to firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH21/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH22

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, red brown, low organic matter, medium plasticity, soft, damp		0.0				
0.1			0.1		BH22/0.1		No odour/ACM
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, brown/yellowy brown, medium to high plasticity, soft, damp to moist		0.4				No odour/ACM
			0.5		BH22/0.5		
	End of Log						End of borehole @ 0.55m due to required depth reached
			0.6				
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH23

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 5

Date: 25/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH23/0.1	0.2	No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH23/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH24

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH01/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH01/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Bore: BH25

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Location Description: Refer to Figure 5

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, red brown, low organic matter, medium plasticity, soft, damp		0.0				
0.1			0.1		BH25/0.1		No odour/ACM
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, brown/yellowy brown, medium to high plasticity, soft, damp to moist		0.4				No odour/ACM
			0.5		BH25/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Bore: BH26

Project Ref. No: 1894
Project Name: Clarkefield
Bore Diameter (mm): 60
OVA Type: n/a

Date: 25/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 5

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium - high plasticity, soft, moist		0.0				
0.1			0.1		BH26/0.1		No odour/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, dark brown/yellowy brown, high plasticity, soft - firm, damp		0.3				No odour/ACM
			0.4				
			0.5		BH26/0.5		
	End of Log		0.6				End of borehole @ 0.55m due to required depth reached
			0.7				
			0.8				
			0.9				
			1.0				
			1.1				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP01

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 60
OVA Type: MiniRae Lite

Location Description: Refer to Figure 3

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**NATURAL** Clayey SILT, brown, medium plasticity, soft, saturated		0.1	Hand Auger	TP01/0.1	0.0	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown/dark brown, medium to high plasticity, soft, saturated		0.5	Hand Auger	TP01/0.5		No odours/ACM
			0.6				
			0.7				
0.8	**NATURAL** CLAY, yellowy brown/orange brown, high plasticity, soft, saturated		0.8				No odours/ACM
			0.9	Hand Auger	TP01/1.0		
	End of Log		1.0				End of testpit due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP02

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 3

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium plasticity, soft, moist		0.0				
0.1			0.1		TP02/0.1	0.1	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown/ brown, high plasticity, soft, saturated		0.5		TP02/0.5		No odours/ACM
			0.6				
			0.7				
0.8	**NATURAL** CLAY with siltstone layer, yellowy brown, high plasticity, firm to stiff, dry to damp		0.8				No odours/ACM
			0.9				
					TP02/1.0		
	End of Log		1.0				End of test pit due to siltstone layer
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP03

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: n/a

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	DISTURBED NATURAL Clayey SILT, dark brown, low organic matter, medium plasticity, soft, moist		0.0				
0.1			0.1		TP03/0.1		No odours/ACM DUP/SPLIT-260620A
			0.2				
			0.3				
			0.4				Tow strap inclusion
			0.5		TP03/0.5		
0.6	**NATURAL** Silty CLAY, brown/yellowy brown, high plasticity, firm, damp		0.6				No odours/ACM
			0.7				
0.8	**NATURAL** CLAY, yellowy brown, high plasticity, stiff, damp		0.8				No odours/ACM
			0.9				
			1.0		TP03/1.0		
			1.1				
			1.2				
			1.3				
					TP03/1.4		
	End of Log		1.4				End of testpit due to rock
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP04

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, dark brown, low organic matter, medium plasticity, soft, damp		0.0				
0.1			0.1		TP04/0.1	0.1	No odours/ACM
			0.2				
			0.3				
			0.4				
			0.5		TP04/0.5		
0.6	**NATURAL** Silty CLAY, yellowy brown, high plasticity, stiff, damp		0.6				No odours/ACM
			0.7				
0.8	**NATURAL** CLAY, yellowy brown, high plasticity, very stiff, damp		0.8				No odours/ACM
			0.9				
					TP04/1.0		
	End of Log		1.0				End of testpit due to rock
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP05

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**NATURAL** Clayey SILT, dark brown, low organic matter, medium plasticity, firm, saturated		0.1 0.2 0.3 0.4		TP05/0.1	0.1	No odours/ACM
0.5	**NATURAL** Silty CLAY, minor fine gravels, yellowy brown, medium to high plasticity, firm, damp		0.5 0.6 0.7		TP05/0.5		No odours/ACM
0.8	**NATURAL** CLAY, brown, high plasticity, very stiff, damp		0.8 0.9 1.0 1.1		TP05/1.0		No odours/ACM
	End of Log		1.2 1.3 1.4 1.5				End of testpit at 1.2m due to required depth reached

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP06

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, dark brown, low organic matter, medium plasticity, firm, moist		0.0				
0.1			0.1		TP06/0.1	0.1	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, minor fine gravels, yellowy brown/brown, high plasticity, firm, damp		0.5		TP06/0.5		No odours/ACM
			0.6				
			0.7				
					TP06/0.8		
	End of Log		0.8				End of testpit due to rock
			0.9				
			1.0				
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP07

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, dark brown/brown, low organic matter, medium plasticity, firm, moist		0.0				
0.1			0.1		TP07/0.1	1.2	No odours/ACM DUP/SPLIT-260620B
			0.2				
			0.3				
			0.4				
			0.5		TP07/0.5		
0.6	**NATURAL** Silty CLAY, yellowy brown/brown, high plasticity, firm, moist		0.6				No odours/ACM
			0.7				
0.8	**NATURAL** CLAY, yellowy brown, high plasticity, stiff, damp		0.8				No odours/ACM
			0.9		TP07/1.0		
	End of Log		1.0				End of testpit due to rock
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP08

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
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Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, dark brown, low organic matter, medium plasticity, firm, damp		0.0				
0.1			0.1		TP08/0.1	0.2	No odours/ACM
			0.2				
			0.3				
0.4	**NATURAL** Silty CLAY, yellowy brown/brown, high plasticity, firm, damp		0.4				No odours/ACM
			0.5		TP08/0.5		
			0.6				
			0.7				
0.8	**NATURAL** CLAY, yellowy brown, high plasticity, stiff, damp		0.8				No odours/ACM
			0.9				
					TP08/1.0		
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP09

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, brown, low organic matter, medium plasticity, firm, moist		0.0				
0.1			0.1		TP09/0.1	0.4	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown/brown, medium to high plasticity, stiff, damp		0.5		TP09/0.5		No odours/ACM
			0.6				
			0.7				
			0.8				
			0.9				
					TP09/1.0		
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Test Pit: TP10

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 4

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**DISTURBED NATURAL** Clayey SILT, brown, low organic matter, medium plasticity, firm, moist		0.1		TP10/0.1	0.0	No odours/ACM DUP/SPLIT-260620C Plastic band fragment
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown/brown, medium to high plasticity, stiff, damp		0.5		TP10/0.5		No odours/ACM
			0.6				
			0.7				
			0.8				
0.9	**NATURAL** CLAY, yellowy brown, high plasticity, very stiff, damp		0.9				No odours/ACM
			1.0		TP10/1.0		
	End of Log						End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Test Pit: TP11

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 4

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**NATURAL** Clayey SILT, dark brown, low organic matter, medium plasticity, firm, moist		0.1		TP11/0.1	0.1	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown, high plasticity, stiff, moist		0.5		TP11/0.5		No odours/ACM
			0.6				
			0.7				
			0.8				
			0.9				
					TP11/1.0		
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Test Pit: TP12

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Location Description: Refer to Figure 4

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface						
	NATURAL Clayey SILT, dark brown, low organic matter, medium plasticity, firm, damp		0.0				
0.1			0.1		TP12/0.1	0.1	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown/brown, medium to high plasticity, stiff, damp		0.5		TP12/0.5		No odours/ACM
			0.6				
			0.7				
			0.8				
			0.9				
					TP12/1.0		
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Test Pit: TP13

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 4

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**NATURAL** Clayey SILT, dark brown, low organic matter, medium plasticity, firm, moist		0.1		TP13/0.1	0.3	No odours/ACM
			0.2				
0.3	**NATURAL** Silty CLAY, yellowy brown/brown, medium to high plasticity, firm, damp		0.3				No odours/ACM
			0.4				
			0.5		TP13/0.5		
0.6	**NATURAL** Clayey SILT, light brown, medium plasticity, soft, dry		0.6				No odours/ACM
			0.7				
			0.8				
			0.9				
					TP13/1.0		
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Atma Environmental

Soil Test Pit: TP14

Project Ref. No: 1894
Project Name: Clarkefield
Test Pit Width (mm): 300
OVA Type: MiniRae Lite

Date: 26/06/2020
Page Number: 1 of 1
Logged By: H.B.
Easting: 0
Northing: 0
Datum: n/a

Location Description: Refer to Figure 4

Depth (m bgl)	Soil Description	Graphic Symbol	Depth (m)	Sample Type	Sample ID	OVA (ppm)	Additional Observations
	Ground Surface		0.0				
0.1	**NATURAL** Clayey SILT, dark brown, low organic matter, medium plasticity, firm, damp		0.1		TP14/0.1	0.2	No odours/ACM
			0.2				
			0.3				
			0.4				
0.5	**NATURAL** Silty CLAY, yellowy brown, medium to high plasticity, firm, damp		0.5		TP14/0.5		No odours/ACM
			0.6				
			0.7				
			0.8				
0.9	**NATURAL** CLAY, yellowy brown, high plasticity, stiff, damp		0.9		TP14/1.0		No odours/ACM
	End of Log		1.0				End of testpit at 1.0m due to required depth reached
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				

Sample Type

Hand Auger | Solid Stem Auger | Push Tube | Split Spoon | Testpit Wall

Soil Stockpile Log

Atma Environmental

Stockpile ID: **SP1**

Log Date: **25-Jun-20**

Project Ref: **1894 - Clarkefield**

Prepared By: **H.B.**

Stockpile Information:

Stockpile Source: **Unknown**

SP Creation Date: **n/a**

Current Location (GPS or describe): **South boundary of central area**

Volumetric Info (length x width x height): **230 m^3**

● Estimated
O Measured

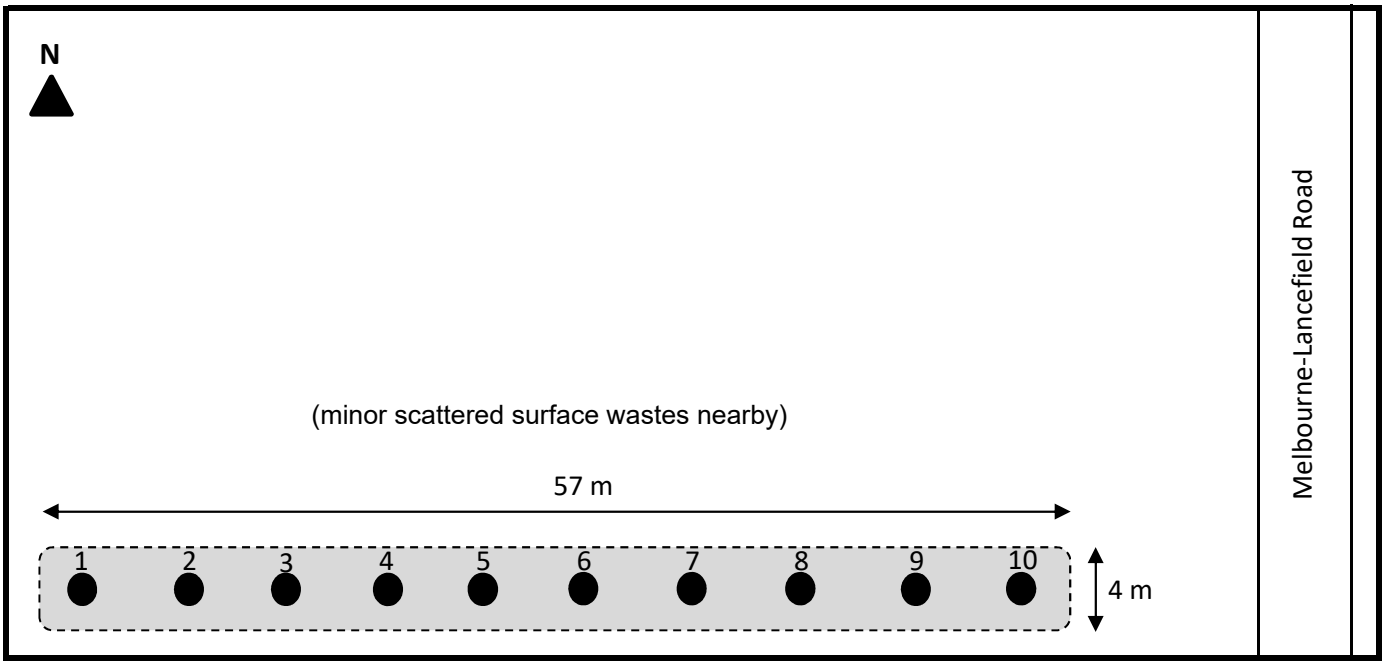
Stockpile Sampling:

Sampling Method: **Shovel**

SP Sampler: **H. Baxter**

Sample ID: (SPx-#)	Date	Soil Sample Description	OVA Readings
SP1-1	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-2	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-3	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-4	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-5	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-6	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-7	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-8	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-9	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-
SP1-10	25/06/2020	FILL, Clayey SILT, minor fine to coarse gravels, brown/grey brown, low plasticity, soft, damp, no odour or ACM	-

Sketch of Stockpile Sample Locations:



APPENDIX D

Laboratory Reports and COC Documents

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 1 of 5

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: HB

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / ____	ANALYSIS FOR: R20	R1	M17 (Metals)	OCPs	Flouride	B4 Suite	pH (CaCl2)	CEC		Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
TRIP-240620						X										X	3		
TRIP-250620						X										X	3		
TRIP-260620						X										X	3		
FIELD-240620						X										X	3		
FIELD-250620						X										X	3		
FIELD-260620						X										X	3		
DECON-240620						X			X								3		
DECON-250620						X			X								3		
DECON-260620						X										X	3		
BH01/0.1	X			X			X						X				1		
BH01/0.5	X			X												X	1		
BH02/0.1	X			X					X	X		X					1		
BH02/0.5	X			X					X	X							1		
BH03/0.1	X			X					X								1		
BH03/0.5	X			X												X	1		
BH04/0.1	X			X					X	X		X					1		
BH04/0.5	X			X					X								1		
BH05/0.1	X			X			X										1		
BH05/0.5	X			X												X	1		
BH06/0.1	X			X					X	X		X	X				1		
BH06/0.5	X			X					X								1		
BH07/0.1	X			X					X								1		
BH07/0.5	X			X												X	1		
BH08/0.1	X			X					X				X				1		
BH08/0.5	X			X					X								1		
TOTAL:	25			25			2		12	4		3	3			11			

DISPATCHED BY: (sign) (DATE/TIME)

△ HB 29-Jun-20 12:00pm

■ RECEIVED BY: (sign) (DATE/TIME)

Mollie Reeve 29/6 5:00pm 1.8 lee

COURIERED BY: (sign) (DATE/TIME)

142

LAB NAME: **Eurofins**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

REMARKS: **Please email completed COC, Sample Receipt Notification, results and invoices to:**

Please email results to: gberry@atmaenvironmental.com

rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

728529

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 2 of 5

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: HB

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / ____	ANALYSIS FOR: R20	R1	M17 (Metals)	OCPs	Flouride	B4 Suite	pH (CaCl2)	CEC		Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
BH09/0.1	X			X					X	X							1		
BH09/0.5	X			X					X	X							1		
BH10/0.1	X			X					X								1		
BH10/0.5	X			X					X								1		
BH11/0.1	X			X					X	X		X					1		
BH11/0.5	X			X												X	1		
BH12/0.1	X			X					X				X				1		
BH12/0.5	X			X					X								1		
BH13/0.1	X			X			X				X						1		
BH13/0.5	X			X												X	1		
BH14/0.1	X			X					X	X							1		
BH14/0.5	X			X					X								1		
BH15/0.1	X			X					X			X	X				1		
BH15/0.5	X			X												X	1		
BH16/0.1	X			X					X	X							1		
BH16/0.5	X			X					X								1		
BH17/0.1	X			X					X								1		
BH17/0.5	X			X												X	1		
BH18/0.1	X			X					X	X							1		
BH18/0.5	X			X					X	X							1		
BH19/0.1	X			X					X			X					1		
BH19/0.5	X			X					X								1		
BH20/0.1	X			X					X	X		X	X	X			1		
BH20/0.5	X			X					X	X							1		
BH21/0.1	X			X					X								1		
TOTAL:	25			25			1		20	9	1	4	3	1		4			

DISPATCHED BY: (sign) (DATE/TIME)

△ HB 29-Jun-20 12:00pm

■ RECEIVED BY: (sign) (DATE/TIME)

COURIERED BY: (sign) (DATE/TIME)

LAB NAME: **Eurofins**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

REMARKS: **Please email completed COC, Sample Receipt Notification, results and invoices to:**

Please email results to: gberry@atmaenvironmental.com
rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 3 of 5

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: HB

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / _____	ANALYSIS FOR: R20 + OCPs	R1	M17 (Metals)	OCPs	Flouride	B4 Suite	pH (CaCl2)	CEC		Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
BH21/0.5	X			X					X								1		
BH22/0.1	X			X					X								1		
BH22/0.5	X			X												X	1		
BH23/0.1	X			X					X	X		X					1		
BH23/0.5	X			X						X							1		
BH24/0.1	X			X					X								1		
BH24/0.5	X			X					X								1		
BH25/0.1	X			X					X	X							1		
BH25/0.5	X			X						X							1		
BH26/0.1	X			X					X			X					1		
BH26/0.5	X			X													1		
TP01/0.1	X			X					X	X	X		X	X			1		
TP01/0.5	X			X					X								1		
TP01/1.0	X			X												X	1		
TP02/0.1	X			X					X	X	X						1		
TP02/0.5	X			X					X								1		
TP02/1.0	X			X												X	1		
TP03/0.1	X			X					X	X	X	X					1		
TP03/0.5	X			X					X								1		
TP03/1.0	X			X												X	1		
TP03/1.4	X			X												X	1		
TP04/0.1	X			X			X						X	X			1		
TP04/0.5	X			X												X	1		
TP04/1.0	X			X												X	1		
TP05/0.1	X			X					X	X		X					1		
TP05/0.5	X			X					X								1		
TOTAL:	26			26			1		15	8	3	4	2	2		7			

DISPATCHED BY: (sign) (DATE/TIME)

△ HB 29-Jun-20 12:00pm

■ RECEIVED BY: (sign) (DATE/TIME)

COURIERED BY: (sign) (DATE/TIME)

LAB NAME: **Eurofins**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

REMARKS: **Please email completed COC, Sample Receipt Notification, results and invoices to:**

Please email results to: gberry@atmaenvironmental.com
rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 4 of 5

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: HB

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / ____	ANALYSIS FOR: R20	R1	M17 (Metals)	OCPs	Flouride	B4 Suite	pH (CaCl2)	CEC		Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
TP05/1.0	X			X												X	1		
TP06/0.1	X			X					X	X		X					1		
TP06/0.5	X			X					X	X							1		
TP06/0.8	X			X												X	1		
TP07/0.1	X			X					X								1		
TP07/0.5	X			X					X								1		
TP07/1.0	X			X												X	1		
TP08/0.1	X			X					X	X		X					1		
TP08/0.5	X			X					X	X							1		
TP08/1.0	X			X												X	1		
TP09/0.1	X			X					X								1		
TP09/0.5	X			X					X								1		
TP09/1.0	X			X												X	1		
TP10/0.1	X			X					X	X		X					1		
TP10/0.5	X			X												X	1		
TP10/1.0	X			X												X	1		
TP11/0.1	X			X					X		X	X					1		
TP11/0.5	X			X					X								1		
TP11/1.0	X			X												X	1		
TP12/0.1	X			X			X										1		
TP12/0.5	X			X												X	1		
TP12/1.0	X			X												X	1		
TP13/0.1	X			X					X	X			X				1		
TP13/0.5	X			X					X	X							1		
TP13/1.0	X			X												X	1		
TOTAL:	25			25			1		13	7	1	4	1			11			

DISPATCHED BY: (sign) (DATE/TIME)

△ HB 29-Jun-20 12:00pm

■ RECEIVED BY: (sign) (DATE/TIME)

COURIERED BY: (sign) (DATE/TIME)

LAB NAME: **Eurofins**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

REMARKS: **Please email completed COC, Sample Receipt Notification, results and invoices to:**

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rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 5 of 5

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: HB

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / _____	ANALYSIS FOR: R20	R1	M17 (Metals)	OCPs	Fluoride	B4 Suite	pH (CaCl2)	CEC		Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
TP14/0.1	X			X					X	X	X		X	X			1		
TP14/0.5	X			X					X	X							1		
TP14/1.0	X			X												X	1		
DUP-240620A	X			X					X	X		X					1		
DUP-240620B	X			X												X	1		
DUP-250620	X			X					X	X		X					1		
DUP-260620A	X			X					X	X		X					1		
DUP-260620B	X			X					X								1		
DUP-260620C	X			X												X	1		
SP1-1	X			X				X									1		
SP1-2	X			X					X								1		
SP1-3	X			X					X								1		
SP1-4	X			X					X								1		
SP1-5	X			X					X								1		
SP1-6	X			X					X								1		
SP1-7	X			X					X								1		
SP1-8	X			X					X								1		
SP1-9	X			X					X								1		
SP1-10	X			X				X									1		
TOTAL:	19			19				2	14	5	1	3	1	1		3	19		

DISPATCHED BY: (sign) (DATE/TIME)

△ HB 29-Jun-20 12:00pm

■ RECEIVED BY: (sign) (DATE/TIME)

COURIERED BY: (sign) (DATE/TIME)

LAB NAME: **Eurofins**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

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Please email results to: gberry@atmaenvironmental.com
rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

*12 Metals: As, Cd, Cr, Cu, Ni, Pb, Zn, Hg, Mo, Se, Ag, Sn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

eurofins | Environment Testing

Melbourne
6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**Atma Environmental**
Contact name:	Rory McPhillips
Project name:	CLARKEFIELD
Project ID:	1894
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jun 29, 2020 5:10 PM
Eurofins reference:	**728529**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Savini Suduweli on Phone : or by e.mail: SaviniSuduweli@eurofins.com

Results will be delivered electronically via e.mail to Rory McPhillips - rmcphillips@atmaenvironmental.com.

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: Atma Environmental
Address: 56 William St
Abbotsford
VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	DECON-240620	Jun 26, 2020		Water	M20-Jn49909					X					
2	DECON-250620	Jun 26, 2020		Water	M20-Jn49910					X					
3	BH01/0.1	Jun 26, 2020		Soil	M20-Jn49911			X			X		X		
4	BH02/0.1	Jun 26, 2020		Soil	M20-Jn49912				X	X	X			X	
5	BH02/0.5	Jun 26, 2020		Soil	M20-Jn49913				X	X	X				
6	BH03/0.1	Jun 26, 2020		Soil	M20-Jn49914					X	X				
7	BH04/0.1	Jun 26, 2020		Soil	M20-Jn49915				X	X	X			X	
8	BH04/0.5	Jun 26, 2020		Soil	M20-Jn49916					X	X				
9	BH05/0.1	Jun 26, 2020		Soil	M20-Jn49917						X		X		

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Project Name: CLARKEFIELD
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Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
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Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
10	BH06/0.1	Jun 26, 2020		Soil	M20-Jn49918			X	X	X	X			X	
11	BH06/0.5	Jun 26, 2020		Soil	M20-Jn49919					X	X				
12	BH07/0.1	Jun 26, 2020		Soil	M20-Jn49920					X	X				
13	BH08/0.1	Jun 26, 2020		Soil	M20-Jn49921			X		X	X				
14	BH08/0.5	Jun 26, 2020		Soil	M20-Jn49922					X	X				
15	BH09/0.1	Jun 26, 2020		Soil	M20-Jn49923				X	X	X				
16	BH09/0.5	Jun 26, 2020		Soil	M20-Jn49924				X	X	X				
17	BH10/0.1	Jun 26, 2020		Soil	M20-Jn49925					X	X				
18	BH10/0.5	Jun 26, 2020		Soil	M20-Jn49926					X	X				
19	BH11/0.1	Jun 26, 2020		Soil	M20-Jn49927				X	X	X			X	
20	BH12/0.1	Jun 26, 2020		Soil	M20-Jn49928			X		X	X				
21	BH12/0.5	Jun 26, 2020		Soil	M20-Jn49929					X	X				
22	BH13/0.1	Jun 26, 2020		Soil	M20-Jn49930	X					X		X		

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
23	BH14/0.1	Jun 26, 2020		Soil	M20-Jn49931				X	X	X				
24	BH14/0.5	Jun 26, 2020		Soil	M20-Jn49932					X	X				
25	BH15/0.1	Jun 26, 2020		Soil	M20-Jn49933			X		X	X			X	
26	BH16/0.1	Jun 26, 2020		Soil	M20-Jn49934				X	X	X				
27	BH16/0.5	Jun 26, 2020		Soil	M20-Jn49935					X	X				
28	BH17/0.1	Jun 26, 2020		Soil	M20-Jn49936					X	X				
29	BH18/0.1	Jun 26, 2020		Soil	M20-Jn49937				X	X	X				
30	BH18/0.5	Jun 26, 2020		Soil	M20-Jn49938				X	X	X				
31	BH19/0.1	Jun 26, 2020		Soil	M20-Jn49939					X	X			X	
32	BH19/0.5	Jun 26, 2020		Soil	M20-Jn49940					X	X				
33	BH20/0.1	Jun 26, 2020		Soil	M20-Jn49941			X	X	X	X	X		X	
34	BH20/0.5	Jun 26, 2020		Soil	M20-Jn49942				X	X	X				
35	BH21/0.1	Jun 26, 2020		Soil	M20-Jn49943					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
36	BH21/0.5	Jun 26, 2020		Soil	M20-Jn49944					X	X				
37	BH22/0.1	Jun 26, 2020		Soil	M20-Jn49945					X	X				
38	BH23/0.1	Jun 26, 2020		Soil	M20-Jn49946				X	X	X			X	
39	BH23/0.5	Jun 26, 2020		Soil	M20-Jn49947				X		X				
40	BH24/0.1	Jun 26, 2020		Soil	M20-Jn49948					X	X				
41	BH24/0.5	Jun 26, 2020		Soil	M20-Jn49949					X	X				
42	BH25/0.1	Jun 26, 2020		Soil	M20-Jn49950				X	X	X				
43	BH25/0.5	Jun 26, 2020		Soil	M20-Jn49951				X		X				
44	BH26/0.1	Jun 26, 2020		Soil	M20-Jn49952					X	X			X	
45	TP01/0.1	Jun 26, 2020		Soil	M20-Jn49953	X		X	X	X	X	X			
46	TP01/0.5	Jun 26, 2020		Soil	M20-Jn49954					X	X				
47	TP02/0.1	Jun 26, 2020		Soil	M20-Jn49955	X			X	X	X				
48	TP02/0.5	Jun 26, 2020		Soil	M20-Jn49956					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
49	TP03/0.1	Jun 26, 2020		Soil	M20-Jn49957	X			X	X	X			X	
50	TP03/0.5	Jun 26, 2020		Soil	M20-Jn49958					X	X				
51	TP04/0.1	Jun 26, 2020		Soil	M20-Jn49959			X	X		X	X	X		
52	TP05/0.1	Jun 26, 2020		Soil	M20-Jn49960				X	X	X			X	
53	TP05/0.5	Jun 26, 2020		Soil	M20-Jn49961					X	X				
54	TP06/0.1	Jun 26, 2020		Soil	M20-Jn49962				X	X	X			X	
55	TP06/0.5	Jun 26, 2020		Soil	M20-Jn49963				X	X	X				
56	TP07/0.1	Jun 26, 2020		Soil	M20-Jn49964					X	X				
57	TP07/0.5	Jun 26, 2020		Soil	M20-Jn49965					X	X				
58	TP08/0.1	Jun 26, 2020		Soil	M20-Jn49966				X	X	X			X	
59	TP08/0.5	Jun 26, 2020		Soil	M20-Jn49967				X	X	X				
60	TP09/0.1	Jun 26, 2020		Soil	M20-Jn49968					X	X				
61	TP09/0.5	Jun 26, 2020		Soil	M20-Jn49969					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
62	TP10/0.1	Jun 26, 2020		Soil	M20-Jn49970				X	X	X			X	
63	TP11/0.1	Jun 26, 2020		Soil	M20-Jn49971	X				X	X			X	
64	TP11/0.5	Jun 26, 2020		Soil	M20-Jn49972					X	X				
65	TP12/0.1	Jun 26, 2020		Soil	M20-Jn49973						X		X		
66	TP13/0.1	Jun 26, 2020		Soil	M20-Jn49974			X	X	X	X				
67	TP13/0.5	Jun 26, 2020		Soil	M20-Jn49975				X	X	X				
68	TP14/0.1	Jun 26, 2020		Soil	M20-Jn49976	X		X	X	X	X	X			
69	TP14/0.5	Jun 26, 2020		Soil	M20-Jn49977				X	X	X				
70	DUP-240620A	Jun 26, 2020		Soil	M20-Jn49978				X	X	X			X	
71	DUP-250620	Jun 26, 2020		Soil	M20-Jn49979				X	X	X			X	
72	DUP-260620A	Jun 26, 2020		Soil	M20-Jn49980				X	X	X			X	
73	DUP-260620B	Jun 26, 2020		Soil	M20-Jn49981					X	X				
74	SP1-1	Jun 26, 2020		Soil	M20-Jn49982						X				X

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
75	SP1-2	Jun 26, 2020		Soil	M20-Jn49983					X	X				
76	SP1-3	Jun 26, 2020		Soil	M20-Jn49984					X	X				
77	SP1-4	Jun 26, 2020		Soil	M20-Jn49985					X	X				
78	SP1-5	Jun 26, 2020		Soil	M20-Jn49986					X	X				
79	SP1-6	Jun 26, 2020		Soil	M20-Jn49987					X	X				
80	SP1-7	Jun 26, 2020		Soil	M20-Jn49988					X	X				
81	SP1-8	Jun 26, 2020		Soil	M20-Jn49989					X	X				
82	SP1-9	Jun 26, 2020		Soil	M20-Jn49990					X	X				
83	SP1-10	Jun 26, 2020		Soil	M20-Jn49991						X				X
84	TRIP-240620	Jun 26, 2020		Water	M20-Jn49992		X								
85	TRIP-250620	Jun 26, 2020		Water	M20-Jn49993		X								
86	TRIP-260620	Jun 26, 2020		Water	M20-Jn49994		X								
87	FIELD-240620	Jun 26, 2020		Water	M20-Jn49995		X								

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
88	FIELD-250620	Jun 26, 2020		Water	M20-Jn49996		X								
89	FIELD-260620	Jun 26, 2020		Water	M20-Jn49997		X								
90	DECON-260620	Jun 26, 2020		Water	M20-Jn49998		X								
91	BH01/0.5	Jun 26, 2020		Soil	M20-Jn49999		X								
92	BH03/0.5	Jun 26, 2020		Soil	M20-Jn50000		X								
93	BH05/0.5	Jun 26, 2020		Soil	M20-Jn50001		X								
94	BH07/0.5	Jun 26, 2020		Soil	M20-Jn50002		X								
95	BH11/0.5	Jun 26, 2020		Soil	M20-Jn50003		X								
96	BH13/0.5	Jun 26, 2020		Soil	M20-Jn50004		X								
97	BH15/0.5	Jun 26, 2020		Soil	M20-Jn50005		X								
98	BH17/0.5	Jun 26, 2020		Soil	M20-Jn50006		X								
99	BH22/0.5	Jun 26, 2020		Soil	M20-Jn50007		X								

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
100	BH26/0.5	Jun 26, 2020		Soil	M20-Jn50008		X								
101	TP01/1.0	Jun 26, 2020		Soil	M20-Jn50009		X								
102	TP02/1.0	Jun 26, 2020		Soil	M20-Jn50010		X								
103	TP03/1.0	Jun 26, 2020		Soil	M20-Jn50011		X								
104	TP03/1.4	Jun 26, 2020		Soil	M20-Jn50012		X								
105	TP04/0.5	Jun 26, 2020		Soil	M20-Jn50013		X								
106	TP04/1.0	Jun 26, 2020		Soil	M20-Jn50014		X								
107	TP05/1.0	Jun 26, 2020		Soil	M20-Jn50015		X								
108	TP06/1.0	Jun 26, 2020		Soil	M20-Jn50016		X								
109	TP07/1.0	Jun 26, 2020		Soil	M20-Jn50017		X								
110	TP08/1.0	Jun 26, 2020		Soil	M20-Jn50018		X								
111	TP09/1.0	Jun 26, 2020		Soil	M20-Jn50019		X								
112	TP10/0.5	Jun 26, 2020		Soil	M20-Jn50020		X								

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Company Name: Atma Environmental
Address: 56 William St
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VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
113	TP10/1.0	Jun 26, 2020		Soil	M20-Jn50021		X								
114	TP11/1.0	Jun 26, 2020		Soil	M20-Jn50022		X								
115	TP12/0.5	Jun 26, 2020		Soil	M20-Jn50023		X								
116	TP12/1.0	Jun 26, 2020		Soil	M20-Jn50024		X								
117	TP13/1.0	Jun 26, 2020		Soil	M20-Jn50025		X								
118	TP14/1.0	Jun 26, 2020		Soil	M20-Jn50026		X								
119	DUP-240620B	Jun 26, 2020		Soil	M20-Jn50027		X								
120	DUP-260620C	Jun 26, 2020		Soil	M20-Jn50028		X								
Test Counts						6	37	10	34	74	81	4	5	18	2

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Atma Environmental
56 William St
Abbotsford
VIC 3067

Attention: **Rory McPhillips**

Report **728529-S**
Project name CLARKEFIELD
Project ID 1894
Received Date Jun 29, 2020

Client Sample ID			**BH01/0.1**	**BH02/0.1**	**BH02/0.5**	**BH03/0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Jn49911**	**M20-Jn49912**	**M20-Jn49913**	**M20-Jn49914**
Date Sampled			**Jun 26, 2020**	**Jun 26, 2020**	**Jun 26, 2020**	**Jun 26, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	83	75	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			BH01/0.1	BH02/0.1	BH02/0.5	BH03/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49911	M20-Jn49912	M20-Jn49913	M20-Jn49914
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	116	119	-	-
p-Terphenyl-d14 (surr.)	1	%	78	77	-	-
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	< 0.05	-	-	-
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Toxaphene	1	mg/kg	-	< 1	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	147	128	-
Tetrachloro-m-xylene (surr.)	1	%	-	134	116	-
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-

Client Sample ID			BH01/0.1	BH02/0.1	BH02/0.5	BH03/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49911	M20-Jn49912	M20-Jn49913	M20-Jn49914
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	92	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	111	-	-	-
Triazines						
Atrazine	0.2	mg/kg	< 0.2	-	-	-
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	< 0.5	-	-	-
2.4-D	0.5	mg/kg	< 0.5	-	-	-
2.4.5-T	0.5	mg/kg	< 0.5	-	-	-
MCPA	0.5	mg/kg	< 0.5	-	-	-
MCPB	0.5	mg/kg	< 0.5	-	-	-
Mecoprop	0.5	mg/kg	< 0.5	-	-	-
Warfarin (surr.)	1	%	90	-	-	-
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Mirex	0.01	mg/kg	< 0.01	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	92	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	111	-	-	-
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	81	-	-	-
Chromium (hexavalent)	1	mg/kg	< 1	-	-	-
Cyanide (free)	5	mg/kg	< 5	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	4.8	-	-	-
% Moisture	1	%	23	27	27	22
Heavy Metals						
Arsenic	2	mg/kg	3.6	4.0	2.9	13
Barium	10	mg/kg	-	95	75	55
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	11	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	30	46	61	70

Client Sample ID			BH01/0.1	BH02/0.1	BH02/0.5	BH03/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49911	M20-Jn49912	M20-Jn49913	M20-Jn49914
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Cobalt	5	mg/kg	5.0	10	14	9.5
Copper	5	mg/kg	8.1	53	14	19
Lead	5	mg/kg	71	98	12	72
Manganese	5	mg/kg	100	120	99	120
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	< 5
Nickel	5	mg/kg	10	23	51	24
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	-	< 10	< 10	< 10
Zinc	5	mg/kg	72	160	24	150

Client Sample ID			BH04/0.1	BH04/0.5	BH05/0.1	BH06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49915	M20-Jn49916	M20-Jn49917	M20-Jn49918
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	-	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	-	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	112	-	104	115
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	-	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	-	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5

Client Sample ID			BH04/0.1	BH04/0.5	BH05/0.1	BH06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49915	M20-Jn49916	M20-Jn49917	M20-Jn49918
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	74	-	80	81
p-Terphenyl-d14 (surr.)	1	%	121	-	89	60
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	-	-	< 0.05	-
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	1	mg/kg	< 1	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	75	-	-	113
Tetrachloro-m-xylene (surr.)	1	%	110	-	-	81
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	-

Client Sample ID			BH04/0.1	BH04/0.5	BH05/0.1	BH06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49915	M20-Jn49916	M20-Jn49917	M20-Jn49918
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	116	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	86	-
Triazines						
Atrazine	0.2	mg/kg	-	-	< 0.2	-
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	< 0.5	-
2.4-D	0.5	mg/kg	-	-	< 0.5	-
2.4.5-T	0.5	mg/kg	-	-	< 0.5	-
MCPA	0.5	mg/kg	-	-	< 0.5	-
MCPB	0.5	mg/kg	-	-	< 0.5	-
Mecoprop	0.5	mg/kg	-	-	< 0.5	-
Warfarin (surr.)	1	%	-	-	94	-
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Mirex	0.01	mg/kg	-	-	< 0.01	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	116	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	86	-
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	81	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	-
Cyanide (free)	5	mg/kg	-	-	< 5	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	-	5.4
% Moisture	1	%	21	26	26	24

Client Sample ID			BH04/0.1	BH04/0.5	BH05/0.1	BH06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49915	M20-Jn49916	M20-Jn49917	M20-Jn49918
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.8	5.1	3.2	2.3
Barium	10	mg/kg	73	70	-	38
Beryllium	2	mg/kg	< 2	2.2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	27	76	63	25
Cobalt	5	mg/kg	6.3	33	21	5.8
Copper	5	mg/kg	11	19	18	7.5
Lead	5	mg/kg	78	20	71	12
Manganese	5	mg/kg	140	84	160	83
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	12	62	39	11
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	150	35	100	45

Client Sample ID			BH06/0.5	BH07/0.1	BH08/0.1	BH08/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49919	M20-Jn49920	M20-Jn49921	M20-Jn49922
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	4.1	-
% Moisture	1	%	18	17	28	17
Heavy Metals						
Arsenic	2	mg/kg	< 2	16	4.1	2.2
Barium	10	mg/kg	200	29	67	34
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	29	41	19	33
Cobalt	5	mg/kg	9.8	< 5	< 5	7.6
Copper	5	mg/kg	6.5	5.7	7.7	6.3
Lead	5	mg/kg	7.2	16	17	10
Manganese	5	mg/kg	41	24	75	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	21	8.7	6.4	13
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	8.2	22	40	8.4

Client Sample ID			BH09/0.1	BH09/0.5	BH10/0.1	BH10/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49923	M20-Jn49924	M20-Jn49925	M20-Jn49926
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	1	mg/kg	< 1	< 1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	85	81	-	-
Tetrachloro-m-xylene (surr.)	1	%	128	75	-	-
% Moisture	1	%	26	27	26	24
Heavy Metals						
Arsenic	2	mg/kg	2.5	< 2	6.4	< 2
Barium	10	mg/kg	100	500	61	38
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	26	53	23	50
Cobalt	5	mg/kg	8.4	25	5.6	13
Copper	5	mg/kg	18	11	11	8.6
Lead	5	mg/kg	26	11	25	10
Manganese	5	mg/kg	83	170	80	55
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	17	48	11	25
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	220	22	64	18

Client Sample ID			BH11/0.1	BH12/0.1	BH12/0.5	BH13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49927	M20-Jn49928	M20-Jn49929	M20-Jn49930
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	< 20
TRH C10-C14	20	mg/kg	< 20	-	-	< 20
TRH C15-C28	50	mg/kg	< 50	-	-	< 50
TRH C29-C36	50	mg/kg	< 50	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	109	-	-	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	< 20
TRH >C10-C16	50	mg/kg	< 50	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	< 50
TRH >C16-C34	100	mg/kg	< 100	-	-	< 100
TRH >C34-C40	100	mg/kg	< 100	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	-	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	-	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	-	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	88	-	-	82
p-Terphenyl-d14 (surr.)	1	%	92	-	-	102

Client Sample ID			BH11/0.1	BH12/0.1	BH12/0.5	BH13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49927	M20-Jn49928	M20-Jn49929	M20-Jn49930
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-BHC	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-BHC	0.05	mg/kg	< 0.05	-	-	-
d-BHC	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	131	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	-
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	129
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	69
Triazines						
Atrazine	0.2	mg/kg	-	-	-	< 0.2
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	-	< 0.5
2.4-D	0.5	mg/kg	-	-	-	< 0.5
2.4.5-T	0.5	mg/kg	-	-	-	< 0.5
MCPA	0.5	mg/kg	-	-	-	< 0.5
MCPB	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH11/0.1	BH12/0.1	BH12/0.5	BH13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49927	M20-Jn49928	M20-Jn49929	M20-Jn49930
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
NEPM 2013 Acid Herbicides						
Mecoprop	0.5	mg/kg	-	-	-	< 0.5
Warfarin (surr.)	1	%	-	-	-	90
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Mirex	0.01	mg/kg	-	-	-	< 0.01
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	129
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	69
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	63
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
Cyanide (free)	5	mg/kg	-	-	-	< 5
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	6.8	-	-
% Moisture	1	%	27	27	17	28
Fluoride (Total)	100	mg/kg	-	-	-	190
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.2	3.9	4.0
Barium	10	mg/kg	17	260	170	-
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	18	11	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.3	46	35	23
Cobalt	5	mg/kg	< 5	22	12	11
Copper	5	mg/kg	< 5	19	13	15
Lead	5	mg/kg	14	15	19	12
Manganese	5	mg/kg	28	470	240	240
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	-
Nickel	5	mg/kg	< 5	51	31	25
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tin	10	mg/kg	< 10	< 10	< 10	-
Zinc	5	mg/kg	27	58	33	55

Client Sample ID			BH14/0.1	BH14/0.5	BH15/0.1	BH16/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49931	M20-Jn49932	M20-Jn49933	M20-Jn49934
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	110	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	96	-
p-Terphenyl-d14 (surr.)	1	%	-	-	108	-

Client Sample ID			BH14/0.1	BH14/0.5	BH15/0.1	BH16/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49931	M20-Jn49932	M20-Jn49933	M20-Jn49934
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	1	mg/kg	< 1	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	131	-	-	75
Tetrachloro-m-xylene (surr.)	1	%	68	-	-	88
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	6.9	-
% Moisture	1	%	29	22	17	27
Heavy Metals						
Arsenic	2	mg/kg	< 2	5.7	2.6	2.4
Barium	10	mg/kg	43	22	150	200
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	37	50	43	44
Cobalt	5	mg/kg	18	6.5	15	18
Copper	5	mg/kg	21	6.7	25	13
Lead	5	mg/kg	< 5	13	8.6	11
Manganese	5	mg/kg	290	40	300	300
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	96	15	42	38
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	46	16	40	26

Client Sample ID			BH16/0.5	BH17/0.1	BH18/0.1	BH18/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49935	M20-Jn49936	M20-Jn49937	M20-Jn49938
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	-	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	96	117
Tetrachloro-m-xylene (surr.)	1	%	-	-	86	83
% Moisture	1	%	29	15	18	22
Heavy Metals						
Arsenic	2	mg/kg	2.2	2.2	3.6	3.6
Barium	10	mg/kg	130	360	39	200
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	20	12	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	46	39	22	53
Cobalt	5	mg/kg	15	20	< 5	9.7
Copper	5	mg/kg	13	16	6.1	11
Lead	5	mg/kg	12	7.6	8.6	15
Manganese	5	mg/kg	240	460	25	45
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	31	52	6.5	30
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	23	30	21	15

Client Sample ID			BH19/0.1	BH19/0.5	BH20/0.1	BH20/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49939	M20-Jn49940	M20-Jn49941	M20-Jn49942
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	< 50	-	< 50	-
TRH C29-C36	50	mg/kg	< 50	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	81	-	79	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	91	-	82	-
p-Terphenyl-d14 (surr.)	1	%	122	-	90	-

Client Sample ID			BH19/0.1	BH19/0.5	BH20/0.1	BH20/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49939	M20-Jn49940	M20-Jn49941	M20-Jn49942
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	-	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	96	121
Tetrachloro-m-xylene (surr.)	1	%	-	-	91	85
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	5.8	-
% Moisture	1	%	15	22	28	25
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	290	-
Heavy Metals						
Arsenic	2	mg/kg	2.4	11	51	4.8
Barium	10	mg/kg	200	210	120	64
Beryllium	2	mg/kg	< 2	< 2	50	< 2
Boron	10	mg/kg	12	< 10	58	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	6.7	< 0.4
Chromium	5	mg/kg	37	42	79	59
Cobalt	5	mg/kg	22	11	60	18
Copper	5	mg/kg	22	16	64	12
Lead	5	mg/kg	7.7	25	92	14
Manganese	5	mg/kg	470	210	170	43
Mercury	0.1	mg/kg	< 0.1	< 0.1	1.4	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	55	< 5
Nickel	5	mg/kg	68	28	63	27
Selenium	2	mg/kg	< 2	< 2	47	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	6.6	< 0.2
Tin	10	mg/kg	< 10	< 10	56	< 10
Zinc	5	mg/kg	45	40	120	16

Client Sample ID			BH19/0.1	BH19/0.5	BH20/0.1	BH20/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49939	M20-Jn49940	M20-Jn49941	M20-Jn49942
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	15	-

Client Sample ID			BH21/0.1	BH21/0.5	BH22/0.1	BH23/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49943	M20-Jn49944	M20-Jn49945	M20-Jn49946
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			BH21/0.1	BH21/0.5	BH22/0.1	BH23/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49943	M20-Jn49944	M20-Jn49945	M20-Jn49946
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	75
p-Terphenyl-d14 (surr.)	1	%	-	-	-	129
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	85
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	52
% Moisture	1	%	19	23	14	26
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	4.2	2.7
Barium	10	mg/kg	28	91	45	42
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	33	16	17
Cobalt	5	mg/kg	< 5	11	< 5	< 5
Copper	5	mg/kg	< 5	7.7	8.8	8.1
Lead	5	mg/kg	8.7	10.0	20	10
Manganese	5	mg/kg	29	26	63	42
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	< 5	16	5.7	6.9

Client Sample ID			BH21/0.1	BH21/0.5	BH22/0.1	BH23/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49943	M20-Jn49944	M20-Jn49945	M20-Jn49946
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	8.8	10	17	38

Client Sample ID			BH23/0.5	BH24/0.1	BH24/0.5	BH25/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49947	M20-Jn49948	M20-Jn49949	M20-Jn49950
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	1	mg/kg	< 1	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	68	-	-	123
Tetrachloro-m-xylene (surr.)	1	%	70	-	-	73
% Moisture	1	%	21	26	21	14
Heavy Metals						
Arsenic	2	mg/kg	-	6.9	< 2	4.6
Barium	10	mg/kg	-	36	65	27
Beryllium	2	mg/kg	-	< 2	< 2	< 2
Boron	10	mg/kg	-	< 10	< 10	< 10
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	21	32	15
Cobalt	5	mg/kg	-	< 5	12	< 5

Client Sample ID			BH23/0.5	BH24/0.1	BH24/0.5	BH25/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49947	M20-Jn49948	M20-Jn49949	M20-Jn49950
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Copper	5	mg/kg	-	5.4	7.3	5.9
Lead	5	mg/kg	-	12	8.4	18
Manganese	5	mg/kg	-	70	38	54
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	< 5
Nickel	5	mg/kg	-	6.1	16	< 5
Selenium	2	mg/kg	-	< 2	< 2	< 2
Silver	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	-	< 10	< 10	< 10
Zinc	5	mg/kg	-	20	8.0	38

Client Sample ID			BH25/0.5	BH26/0.1	TP01/0.1	TP01/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49951	M20-Jn49952	M20-Jn49953	M20-Jn49954
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	< 50	-	-
TRH C29-C36	50	mg/kg	-	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	108	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	-
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	< 100	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	-	-
Acenaphthene	0.5	mg/kg	-	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	-	< 0.5	-	-
Anthracene	0.5	mg/kg	-	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	-	-

Client Sample ID			BH25/0.5	BH26/0.1	TP01/0.1	TP01/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49951	M20-Jn49952	M20-Jn49953	M20-Jn49954
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Chrysene	0.5	mg/kg	-	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	-	-
Fluoranthene	0.5	mg/kg	-	< 0.5	-	-
Fluorene	0.5	mg/kg	-	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	-	-
Naphthalene	0.5	mg/kg	-	< 0.5	-	-
Phenanthrene	0.5	mg/kg	-	< 0.5	-	-
Pyrene	0.5	mg/kg	-	< 0.5	-	-
Total PAH*	0.5	mg/kg	-	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	-	95	-	-
p-Terphenyl-d14 (surr.)	1	%	-	95	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	70	-	74	-
Tetrachloro-m-xylene (surr.)	1	%	62	-	75	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	4.5	-
% Moisture	1	%	19	22	19	17
Fluoride (Total)	100	mg/kg	-	-	230	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	520	-

Client Sample ID			BH25/0.5	BH26/0.1	TP01/0.1	TP01/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49951	M20-Jn49952	M20-Jn49953	M20-Jn49954
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	4.0	4.7	19
Barium	10	mg/kg	-	27	160	2700
Beryllium	2	mg/kg	-	< 2	< 2	< 2
Boron	10	mg/kg	-	< 10	< 10	< 10
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	21	25	65
Cobalt	5	mg/kg	-	< 5	< 5	18
Copper	5	mg/kg	-	6.7	< 5	11
Lead	5	mg/kg	-	10.0	14	27
Manganese	5	mg/kg	-	52	39	35
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	< 5
Nickel	5	mg/kg	-	< 5	7.9	36
Selenium	2	mg/kg	-	< 2	< 2	< 2
Silver	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	-	< 10	< 10	< 10
Zinc	5	mg/kg	-	65	6.3	8.7
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	5.6	-

Client Sample ID			TP02/0.1	TP02/0.5	TP03/0.1	TP03/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49955	M20-Jn49956	M20-Jn49957	M20-Jn49958
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	104	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-

Client Sample ID			TP02/0.1	TP02/0.5	TP03/0.1	TP03/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49955	M20-Jn49956	M20-Jn49957	M20-Jn49958
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	73	-
p-Terphenyl-d14 (surr.)	1	%	-	-	91	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	-
Toxaphene	1	mg/kg	< 1	-	< 1	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	106	-	119	-
Tetrachloro-m-xylene (surr.)	1	%	74	-	68	-

Client Sample ID			TP02/0.1	TP02/0.5	TP03/0.1	TP03/0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49955	M20-Jn49956	M20-Jn49957	M20-Jn49958
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	12	25	22	22
Fluoride (Total)	100	mg/kg	170	-	180	-
Heavy Metals						
Arsenic	2	mg/kg	3.7	6.4	2.9	8.1
Barium	10	mg/kg	66	1100	310	270
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	25	49	37	31
Cobalt	5	mg/kg	< 5	13	11	7.1
Copper	5	mg/kg	5.4	8.0	11	7.5
Lead	5	mg/kg	12	17	17	16
Manganese	5	mg/kg	31	32	120	100
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	8.2	21	22	14
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	6.7	10	26	19

Client Sample ID			TP04/0.1	TP05/0.1	TP05/0.5	TP06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49959	M20-Jn49960	M20-Jn49961	M20-Jn49962
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	99	-	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	< 100

Client Sample ID			TP04/0.1	TP05/0.1	TP05/0.5	TP06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49959	M20-Jn49960	M20-Jn49961	M20-Jn49962
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	63	-	59
p-Terphenyl-d14 (surr.)	1	%	76	83	-	78
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	< 0.05	-	-	-
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1

Client Sample ID			TP04/0.1	TP05/0.1	TP05/0.5	TP06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49959	M20-Jn49960	M20-Jn49961	M20-Jn49962
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dibutylchlorendate (surr.)	1	%	90	78	-	144
Tetrachloro-m-xylene (surr.)	1	%	68	78	-	79
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	90	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	68	-	-	-
Triazines						
Atrazine	0.2	mg/kg	< 0.2	-	-	-
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	< 0.5	-	-	-
2.4-D	0.5	mg/kg	< 0.5	-	-	-
2.4.5-T	0.5	mg/kg	< 0.5	-	-	-
MCPA	0.5	mg/kg	< 0.5	-	-	-
MCPB	0.5	mg/kg	< 0.5	-	-	-
Mecoprop	0.5	mg/kg	< 0.5	-	-	-
Warfarin (surr.)	1	%	100	-	-	-
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Mirex	0.01	mg/kg	< 0.01	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	1	mg/kg	< 1	-	-	-
Dibutylchlorendate (surr.)	1	%	90	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	68	-	-	-
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	71	-	-	-

Client Sample ID			TP04/0.1	TP05/0.1	TP05/0.5	TP06/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49959	M20-Jn49960	M20-Jn49961	M20-Jn49962
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Chromium (hexavalent)	1	mg/kg	< 1	-	-	-
Cyanide (free)	5	mg/kg	< 5	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	5.0	-	-	-
% Moisture	1	%	24	24	17	29
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	40	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.6	6.7	10	3.1
Barium	10	mg/kg	-	260	440	48
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	26	26	40	46
Cobalt	5	mg/kg	< 5	7.9	7.3	11
Copper	5	mg/kg	< 5	7.2	8.3	10
Lead	5	mg/kg	12	16	18	15
Manganese	5	mg/kg	91	120	24	220
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	-	< 5	< 5	< 5
Nickel	5	mg/kg	6.7	13	15	20
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	-	< 10	< 10	< 10
Zinc	5	mg/kg	9.5	17	6.0	20
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	8.5	-	-	-

Client Sample ID			TP06/0.5	TP07/0.1	TP07/0.5	TP08/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49963	M20-Jn49964	M20-Jn49965	M20-Jn49966
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	77

Client Sample ID			TP06/0.5	TP07/0.1	TP07/0.5	TP08/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49963	M20-Jn49964	M20-Jn49965	M20-Jn49966
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	80
p-Terphenyl-d14 (surr.)	1	%	-	-	-	132
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05

Client Sample ID			TP06/0.5	TP07/0.1	TP07/0.5	TP08/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49963	M20-Jn49964	M20-Jn49965	M20-Jn49966
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	1	mg/kg	< 1	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	141	-	-	149
Tetrachloro-m-xylene (surr.)	1	%	90	-	-	106
% Moisture	1	%	21	26	21	25
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Barium	10	mg/kg	61	54	41	45
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	52	20	45	13
Cobalt	5	mg/kg	24	5.0	13	< 5
Copper	5	mg/kg	14	5.9	12	5.2
Lead	5	mg/kg	9.0	12	12	19
Manganese	5	mg/kg	170	83	42	39
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	53	7.4	19	< 5
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	15	9.4	8.4	8.0

Client Sample ID			TP08/0.5	TP09/0.1	TP09/0.5	TP10/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49967	M20-Jn49968	M20-Jn49969	M20-Jn49970
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1

Client Sample ID			TP08/0.5	TP09/0.1	TP09/0.5	TP10/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49967	M20-Jn49968	M20-Jn49969	M20-Jn49970
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
BTEX						
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	80
p-Terphenyl-d14 (surr.)	1	%	-	-	-	85
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	< 0.05

Client Sample ID			TP08/0.5	TP09/0.1	TP09/0.5	TP10/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49967	M20-Jn49968	M20-Jn49969	M20-Jn49970
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin ketone	0.05	mg/kg	< 0.05	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	-	< 0.05
Toxaphene	1	mg/kg	< 1	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	116	-	-	112
Tetrachloro-m-xylene (surr.)	1	%	90	-	-	87
% Moisture	1	%	22	26	27	21
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Barium	10	mg/kg	120	330	820	56
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	32	31	32	32
Cobalt	5	mg/kg	9.8	14	15	6.6
Copper	5	mg/kg	7.9	7.8	6.9	5.5
Lead	5	mg/kg	13	13	11	11
Manganese	5	mg/kg	52	56	71	52
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	17	20	17	11
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	9.9	14	14	13

Client Sample ID			TP11/0.1	TP11/0.5	TP12/0.1	TP13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49971	M20-Jn49972	M20-Jn49973	M20-Jn49974
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	< 50	-	< 50	-
TRH C29-C36	50	mg/kg	< 50	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	< 50	-

Client Sample ID			TP11/0.1	TP11/0.5	TP12/0.1	TP13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49971	M20-Jn49972	M20-Jn49973	M20-Jn49974
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	129	-	98	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	< 20	-
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	< 100	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	108	-	74	-
p-Terphenyl-d14 (surr.)	1	%	111	-	96	-
Organochlorine Pesticides						
Bifenthrin	0.05	mg/kg	-	-	< 0.05	-
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-BHC	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-BHC	0.05	mg/kg	-	-	-	< 0.05
d-BHC	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			TP11/0.1	TP11/0.5	TP12/0.1	TP13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49971	M20-Jn49972	M20-Jn49973	M20-Jn49974
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	1	mg/kg	-	-	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	140
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	86
Organophosphorus Pesticides						
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	124	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	81	-
Triazines						
Atrazine	0.2	mg/kg	-	-	< 0.2	-
NEPM 2013 Acid Herbicides						
Picloram	0.5	mg/kg	-	-	< 0.5	-
2.4-D	0.5	mg/kg	-	-	< 0.5	-
2.4.5-T	0.5	mg/kg	-	-	< 0.5	-
MCPA	0.5	mg/kg	-	-	< 0.5	-
MCPB	0.5	mg/kg	-	-	< 0.5	-
Mecoprop	0.5	mg/kg	-	-	< 0.5	-
Warfarin (surr.)	1	%	-	-	90	-
NEPM 2013 Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Mirex	0.01	mg/kg	-	-	< 0.01	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			TP11/0.1	TP11/0.5	TP12/0.1	TP13/0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49971	M20-Jn49972	M20-Jn49973	M20-Jn49974
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
NEPM 2013 Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	1	mg/kg	-	-	< 1	-
Dibutylchlorendate (surr.)	1	%	-	-	124	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	81	-
NEPM 2013 Phenols						
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	79	-
Chromium (hexavalent)	1	mg/kg	-	-	< 1	-
Cyanide (free)	5	mg/kg	-	-	< 5	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	-	-	6.8
% Moisture	1	%	20	20	23	14
Fluoride (Total)	100	mg/kg	200	-	-	-
Heavy Metals						
Arsenic	2	mg/kg	5.2	6.8	5.2	2.8
Barium	10	mg/kg	370	340	-	120
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	38	36	28	25
Cobalt	5	mg/kg	9.7	13	< 5	10
Copper	5	mg/kg	8.9	19	5.9	15
Lead	5	mg/kg	19	21	14	21
Manganese	5	mg/kg	110	220	90	330
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	-	< 5
Nickel	5	mg/kg	18	29	8.3	21
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tin	10	mg/kg	< 10	< 10	-	< 10
Zinc	5	mg/kg	20	29	9.3	30

Client Sample ID			TP13/0.5	TP14/0.1	TP14/0.5	DUP-240620A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49975	M20-Jn49976	M20-Jn49977	M20-Jn49978
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	111
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	76
p-Terphenyl-d14 (surr.)	1	%	-	-	-	91

Client Sample ID			TP13/0.5	TP14/0.1	TP14/0.5	DUP-240620A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49975	M20-Jn49976	M20-Jn49977	M20-Jn49978
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	144	92	119	103
Tetrachloro-m-xylene (surr.)	1	%	84	85	87	90
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	-	5.0	-	-
% Moisture	1	%	20	23	22	22
Fluoride (Total)	100	mg/kg	-	120	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	390	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	2.1	< 2	5.2
Barium	10	mg/kg	310	37	69	39
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	< 10	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	28	19	43	25
Cobalt	5	mg/kg	9.9	< 5	13	< 5
Copper	5	mg/kg	8.7	5.3	6.9	5.5
Lead	5	mg/kg	10	10	11	10
Manganese	5	mg/kg	28	68	42	64
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	15	6.9	20	8.3
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	9.5	12	11	37

Client Sample ID			TP13/0.5	TP14/0.1	TP14/0.5	DUP-240620A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49975	M20-Jn49976	M20-Jn49977	M20-Jn49978
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	10	-	-

Client Sample ID			DUP-250620	DUP-260620A	DUP-260620B	SP1-1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49979	M20-Jn49980	M20-Jn49981	M20-Jn49982
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	106	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			DUP-250620	DUP-260620A	DUP-260620B	SP1-1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49979	M20-Jn49980	M20-Jn49981	M20-Jn49982
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	83	-	75
p-Terphenyl-d14 (surr.)	1	%	81	94	-	86
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	-	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	115	116	-	101
Tetrachloro-m-xylene (surr.)	1	%	89	100	-	88
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	101
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	88
Chromium (hexavalent)	1	mg/kg	-	-	-	< 1
% Moisture	1	%	27	21	24	21
Fluoride (Total)	100	mg/kg	-	-	-	260
Cyanide (total)	5	mg/kg	-	-	-	< 5
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	8.2

Client Sample ID			DUP-250620	DUP-260620A	DUP-260620B	SP1-1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49979	M20-Jn49980	M20-Jn49981	M20-Jn49982
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	10	15	< 2	5.1
Barium	10	mg/kg	50	600	51	-
Beryllium	2	mg/kg	< 2	< 2	< 2	-
Boron	10	mg/kg	< 10	< 10	< 10	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	32	61	20	33
Cobalt	5	mg/kg	6.3	13	< 5	-
Copper	5	mg/kg	8.6	12	5.0	11
Lead	5	mg/kg	32	26	10	23
Manganese	5	mg/kg	130	110	65	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	9.4	24	6.7	13
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	44	27	7.3	38
Volatile Organics						
Hexachlorobutadiene	0.5	mg/kg	-	-	-	< 0.5
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	-	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	-	-	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	-	-	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	-	-	< 0.5
2-Butanone (MEK)	0.5	mg/kg	-	-	-	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	-	-	-	< 0.5
4-Chlorotoluene	0.5	mg/kg	-	-	-	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	-	-	-	< 0.5
Allyl chloride	0.5	mg/kg	-	-	-	< 0.5
Benzene	0.1	mg/kg	-	-	-	< 0.1
Bromobenzene	0.5	mg/kg	-	-	-	< 0.5
Bromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	-	-	< 0.5
Bromoform	0.5	mg/kg	-	-	-	< 0.5
Bromomethane	0.5	mg/kg	-	-	-	< 0.5
Carbon disulfide	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			DUP-250620	DUP-260620A	DUP-260620B	SP1-1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49979	M20-Jn49980	M20-Jn49981	M20-Jn49982
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Carbon Tetrachloride	0.5	mg/kg	-	-	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	-	-	< 0.5
Chloroethane	0.5	mg/kg	-	-	-	< 0.5
Chloroform	0.5	mg/kg	-	-	-	< 0.5
Chloromethane	0.5	mg/kg	-	-	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	-	-	< 0.5
Dibromomethane	0.5	mg/kg	-	-	-	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	-	-	-	< 0.5
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
Iodomethane	0.5	mg/kg	-	-	-	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	-	-	-	< 0.5
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
Methylene Chloride	0.5	mg/kg	-	-	-	< 0.5
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Styrene	0.5	mg/kg	-	-	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	-	-	< 0.5
Toluene	0.1	mg/kg	-	-	-	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	-	-	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	-	-	< 0.5
Trichloroethene	0.5	mg/kg	-	-	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	-	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	-	-	< 0.5
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
Total MAH*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	-	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	-	-	107
Toluene-d8 (surr.)	1	%	-	-	-	75
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
2-Nitrophenol	1.0	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
4-Nitrophenol	5	mg/kg	-	-	-	< 5

Client Sample ID			DUP-250620	DUP-260620A	DUP-260620B	SP1-1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49979	M20-Jn49980	M20-Jn49981	M20-Jn49982
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20
Phenol-d6 (surr.)	1	%	-	-	-	79

Client Sample ID			SP1-2	SP1-3	SP1-4	SP1-5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49983	M20-Jn49984	M20-Jn49985	M20-Jn49986
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	21	18	19	17
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	2.7	2.4
Barium	10	mg/kg	220	320	240	200
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	16	11	14	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	39	33	35	39
Cobalt	5	mg/kg	17	24	20	23
Copper	5	mg/kg	9.7	8.6	17	23
Lead	5	mg/kg	9.2	7.8	8.4	7.5
Manganese	5	mg/kg	180	240	340	520
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	33	49	51	68
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	20	19	36	45

Client Sample ID			SP1-6	SP1-7	SP1-8	SP1-9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49987	M20-Jn49988	M20-Jn49989	M20-Jn49990
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	37	11	9.8	12
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.3	< 2	2.1
Barium	10	mg/kg	330	250	220	210
Beryllium	2	mg/kg	< 2	< 2	< 2	< 2
Boron	10	mg/kg	20	< 10	< 10	< 10
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	52	31	27	27
Cobalt	5	mg/kg	18	23	24	21

Client Sample ID			SP1-6	SP1-7	SP1-8	SP1-9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Jn49987	M20-Jn49988	M20-Jn49989	M20-Jn49990
Date Sampled			Jun 26, 2020	Jun 26, 2020	Jun 26, 2020	Jun 26, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Copper	5	mg/kg	15	27	25	21
Lead	5	mg/kg	9.1	5.2	< 5	5.1
Manganese	5	mg/kg	320	500	500	460
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	5	mg/kg	< 5	< 5	< 5	< 5
Nickel	5	mg/kg	43	78	83	66
Selenium	2	mg/kg	< 2	< 2	< 2	< 2
Silver	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tin	10	mg/kg	< 10	< 10	< 10	< 10
Zinc	5	mg/kg	30	58	49	45

Client Sample ID			SP1-10
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn49991
Date Sampled			Jun 26, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5

Client Sample ID			SP1-10
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn49991
Date Sampled			Jun 26, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	75
p-Terphenyl-d14 (surr.)	1	%	84
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	124
Tetrachloro-m-xylene (surr.)	1	%	89
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	124
Tetrachloro-m-xylene (surr.)	1	%	89

Client Sample ID			SP1-10
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn49991
Date Sampled			Jun 26, 2020
Test/Reference	LOR	Unit	
Chromium (hexavalent)	1	mg/kg	< 1
% Moisture	1	%	27
Fluoride (Total)	100	mg/kg	230
Cyanide (total)	5	mg/kg	< 5
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.6
Heavy Metals			
Arsenic	2	mg/kg	7.2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	45
Copper	5	mg/kg	17
Lead	5	mg/kg	77
Mercury	0.1	mg/kg	< 0.1
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	23
Selenium	2	mg/kg	< 2
Silver	0.2	mg/kg	< 0.2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	220
Volatile Organics			
Hexachlorobutadiene	0.5	mg/kg	< 0.5
Volatile Organics			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5

Client Sample ID			SP1-10
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn49991
Date Sampled			Jun 26, 2020
Test/Reference	LOR	Unit	
Volatile Organics			
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	65
Toluene-d8 (surr.)	1	%	74
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Nitrophenol	1.0	mg/kg	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4

Client Sample ID			SP1-10
Sample Matrix			Soil
Eurofins Sample No.			M20-Jn49991
Date Sampled			Jun 26, 2020
Test/Reference	LOR	Unit	
Phenols (non-Halogenated)			
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20
Phenol-d6 (surr.)	1	%	82

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Vic EPA IWRG 621 (Solids)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jul 01, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Jul 01, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Chromium (hexavalent)	Melbourne	Jul 01, 2020	28 Days
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Fluoride (Total)	Melbourne	Jul 02, 2020	28 Days
- Method: LTM-INO-4150 Determination of Total Fluoride PART B – ISE			
Cyanide (total)	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
pH (1:5 Aqueous extract at 25°C as rec.)	Melbourne	Jul 01, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals IWRG 621 : Metals M12	Melbourne	Jul 02, 2020	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Melbourne	Jul 01, 2020	7 Days
- Method: USEPA 8260 - MGT 350A Volatile Organics by GCMS			
Volatile Organics	Melbourne	Jul 01, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Phenols (Halogenated)	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Eurofins | mgt Suite B4			
BTEX	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding Methyl Mercury/PBDE			
Organophosphorus Pesticides	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Triazines	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
NEPM 2013 Acid Herbicides	Melbourne	Jul 01, 2020	14 Days
- Method: MGT 530			
NEPM 2013 Organochlorine Pesticides	Melbourne	Jul 01, 2020	14 Days
- Method: USEPA 8081 Organochlorine Pesticides			
NEPM 2013 Phenols	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Cyanide (free)	Melbourne	Jul 01, 2020	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
NEPM 2013 Metals : Metals M12	Melbourne	Jul 02, 2020	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
Heavy Metals	Melbourne	Jul 02, 2020	180 Days

Description	Testing Site	Extracted	Holding Time
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
VIC EPA Metals : Metals M17	Melbourne	Jul 02, 2020	180 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Jul 01, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
% Moisture	Melbourne	Jun 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Jul 01, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Jul 02, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			

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Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	DECON-240620	Jun 26, 2020		Water	M20-Jn49909					X					
2	DECON-250620	Jun 26, 2020		Water	M20-Jn49910					X					
3	BH01/0.1	Jun 26, 2020		Soil	M20-Jn49911			X			X		X		
4	BH02/0.1	Jun 26, 2020		Soil	M20-Jn49912				X	X	X			X	
5	BH02/0.5	Jun 26, 2020		Soil	M20-Jn49913				X	X	X				
6	BH03/0.1	Jun 26, 2020		Soil	M20-Jn49914					X	X				
7	BH04/0.1	Jun 26, 2020		Soil	M20-Jn49915				X	X	X			X	
8	BH04/0.5	Jun 26, 2020		Soil	M20-Jn49916					X	X				
9	BH05/0.1	Jun 26, 2020		Soil	M20-Jn49917						X		X		

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Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
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Phone: 9429 6955
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Received: Jun 29, 2020 5:10 PM
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Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
10	BH06/0.1	Jun 26, 2020		Soil	M20-Jn49918			X	X	X	X			X	
11	BH06/0.5	Jun 26, 2020		Soil	M20-Jn49919					X	X				
12	BH07/0.1	Jun 26, 2020		Soil	M20-Jn49920					X	X				
13	BH08/0.1	Jun 26, 2020		Soil	M20-Jn49921			X		X	X				
14	BH08/0.5	Jun 26, 2020		Soil	M20-Jn49922					X	X				
15	BH09/0.1	Jun 26, 2020		Soil	M20-Jn49923				X	X	X				
16	BH09/0.5	Jun 26, 2020		Soil	M20-Jn49924				X	X	X				
17	BH10/0.1	Jun 26, 2020		Soil	M20-Jn49925					X	X				
18	BH10/0.5	Jun 26, 2020		Soil	M20-Jn49926					X	X				
19	BH11/0.1	Jun 26, 2020		Soil	M20-Jn49927				X	X	X			X	
20	BH12/0.1	Jun 26, 2020		Soil	M20-Jn49928			X		X	X				
21	BH12/0.5	Jun 26, 2020		Soil	M20-Jn49929					X	X				
22	BH13/0.1	Jun 26, 2020		Soil	M20-Jn49930	X					X		X		

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Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
23	BH14/0.1	Jun 26, 2020		Soil	M20-Jn49931				X	X	X				
24	BH14/0.5	Jun 26, 2020		Soil	M20-Jn49932					X	X				
25	BH15/0.1	Jun 26, 2020		Soil	M20-Jn49933			X		X	X			X	
26	BH16/0.1	Jun 26, 2020		Soil	M20-Jn49934				X	X	X				
27	BH16/0.5	Jun 26, 2020		Soil	M20-Jn49935					X	X				
28	BH17/0.1	Jun 26, 2020		Soil	M20-Jn49936					X	X				
29	BH18/0.1	Jun 26, 2020		Soil	M20-Jn49937				X	X	X				
30	BH18/0.5	Jun 26, 2020		Soil	M20-Jn49938				X	X	X				
31	BH19/0.1	Jun 26, 2020		Soil	M20-Jn49939					X	X			X	
32	BH19/0.5	Jun 26, 2020		Soil	M20-Jn49940					X	X				
33	BH20/0.1	Jun 26, 2020		Soil	M20-Jn49941			X	X	X	X	X		X	
34	BH20/0.5	Jun 26, 2020		Soil	M20-Jn49942				X	X	X				
35	BH21/0.1	Jun 26, 2020		Soil	M20-Jn49943					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
36	BH21/0.5	Jun 26, 2020		Soil	M20-Jn49944					X	X				
37	BH22/0.1	Jun 26, 2020		Soil	M20-Jn49945					X	X				
38	BH23/0.1	Jun 26, 2020		Soil	M20-Jn49946				X	X	X			X	
39	BH23/0.5	Jun 26, 2020		Soil	M20-Jn49947				X		X				
40	BH24/0.1	Jun 26, 2020		Soil	M20-Jn49948					X	X				
41	BH24/0.5	Jun 26, 2020		Soil	M20-Jn49949					X	X				
42	BH25/0.1	Jun 26, 2020		Soil	M20-Jn49950				X	X	X				
43	BH25/0.5	Jun 26, 2020		Soil	M20-Jn49951				X		X				
44	BH26/0.1	Jun 26, 2020		Soil	M20-Jn49952					X	X			X	
45	TP01/0.1	Jun 26, 2020		Soil	M20-Jn49953	X		X	X	X	X	X			
46	TP01/0.5	Jun 26, 2020		Soil	M20-Jn49954					X	X				
47	TP02/0.1	Jun 26, 2020		Soil	M20-Jn49955	X			X	X	X				
48	TP02/0.5	Jun 26, 2020		Soil	M20-Jn49956					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
49	TP03/0.1	Jun 26, 2020		Soil	M20-Jn49957	X			X	X	X			X	
50	TP03/0.5	Jun 26, 2020		Soil	M20-Jn49958					X	X				
51	TP04/0.1	Jun 26, 2020		Soil	M20-Jn49959			X	X		X	X	X		
52	TP05/0.1	Jun 26, 2020		Soil	M20-Jn49960				X	X	X			X	
53	TP05/0.5	Jun 26, 2020		Soil	M20-Jn49961					X	X				
54	TP06/0.1	Jun 26, 2020		Soil	M20-Jn49962				X	X	X			X	
55	TP06/0.5	Jun 26, 2020		Soil	M20-Jn49963				X	X	X				
56	TP07/0.1	Jun 26, 2020		Soil	M20-Jn49964					X	X				
57	TP07/0.5	Jun 26, 2020		Soil	M20-Jn49965					X	X				
58	TP08/0.1	Jun 26, 2020		Soil	M20-Jn49966				X	X	X			X	
59	TP08/0.5	Jun 26, 2020		Soil	M20-Jn49967				X	X	X				
60	TP09/0.1	Jun 26, 2020		Soil	M20-Jn49968					X	X				
61	TP09/0.5	Jun 26, 2020		Soil	M20-Jn49969					X	X				

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
62	TP10/0.1	Jun 26, 2020		Soil	M20-Jn49970				X	X	X			X	
63	TP11/0.1	Jun 26, 2020		Soil	M20-Jn49971	X				X	X			X	
64	TP11/0.5	Jun 26, 2020		Soil	M20-Jn49972					X	X				
65	TP12/0.1	Jun 26, 2020		Soil	M20-Jn49973						X		X		
66	TP13/0.1	Jun 26, 2020		Soil	M20-Jn49974			X	X	X	X				
67	TP13/0.5	Jun 26, 2020		Soil	M20-Jn49975				X	X	X				
68	TP14/0.1	Jun 26, 2020		Soil	M20-Jn49976	X		X	X	X	X	X			
69	TP14/0.5	Jun 26, 2020		Soil	M20-Jn49977				X	X	X				
70	DUP-240620A	Jun 26, 2020		Soil	M20-Jn49978				X	X	X			X	
71	DUP-250620	Jun 26, 2020		Soil	M20-Jn49979				X	X	X			X	
72	DUP-260620A	Jun 26, 2020		Soil	M20-Jn49980				X	X	X			X	
73	DUP-260620B	Jun 26, 2020		Soil	M20-Jn49981					X	X				
74	SP1-1	Jun 26, 2020		Soil	M20-Jn49982						X				X

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
75	SP1-2	Jun 26, 2020		Soil	M20-Jn49983					X	X				
76	SP1-3	Jun 26, 2020		Soil	M20-Jn49984					X	X				
77	SP1-4	Jun 26, 2020		Soil	M20-Jn49985					X	X				
78	SP1-5	Jun 26, 2020		Soil	M20-Jn49986					X	X				
79	SP1-6	Jun 26, 2020		Soil	M20-Jn49987					X	X				
80	SP1-7	Jun 26, 2020		Soil	M20-Jn49988					X	X				
81	SP1-8	Jun 26, 2020		Soil	M20-Jn49989					X	X				
82	SP1-9	Jun 26, 2020		Soil	M20-Jn49990					X	X				
83	SP1-10	Jun 26, 2020		Soil	M20-Jn49991						X				X
84	TRIP-240620	Jun 26, 2020		Water	M20-Jn49992		X								
85	TRIP-250620	Jun 26, 2020		Water	M20-Jn49993		X								
86	TRIP-260620	Jun 26, 2020		Water	M20-Jn49994		X								
87	FIELD-240620	Jun 26, 2020		Water	M20-Jn49995		X								

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
88	FIELD-250620	Jun 26, 2020		Water	M20-Jn49996		X								
89	FIELD-260620	Jun 26, 2020		Water	M20-Jn49997		X								
90	DECON-260620	Jun 26, 2020		Water	M20-Jn49998		X								
91	BH01/0.5	Jun 26, 2020		Soil	M20-Jn49999		X								
92	BH03/0.5	Jun 26, 2020		Soil	M20-Jn50000		X								
93	BH05/0.5	Jun 26, 2020		Soil	M20-Jn50001		X								
94	BH07/0.5	Jun 26, 2020		Soil	M20-Jn50002		X								
95	BH11/0.5	Jun 26, 2020		Soil	M20-Jn50003		X								
96	BH13/0.5	Jun 26, 2020		Soil	M20-Jn50004		X								
97	BH15/0.5	Jun 26, 2020		Soil	M20-Jn50005		X								
98	BH17/0.5	Jun 26, 2020		Soil	M20-Jn50006		X								
99	BH22/0.5	Jun 26, 2020		Soil	M20-Jn50007		X								

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
100	BH26/0.5	Jun 26, 2020		Soil	M20-Jn50008		X								
101	TP01/1.0	Jun 26, 2020		Soil	M20-Jn50009		X								
102	TP02/1.0	Jun 26, 2020		Soil	M20-Jn50010		X								
103	TP03/1.0	Jun 26, 2020		Soil	M20-Jn50011		X								
104	TP03/1.4	Jun 26, 2020		Soil	M20-Jn50012		X								
105	TP04/0.5	Jun 26, 2020		Soil	M20-Jn50013		X								
106	TP04/1.0	Jun 26, 2020		Soil	M20-Jn50014		X								
107	TP05/1.0	Jun 26, 2020		Soil	M20-Jn50015		X								
108	TP06/1.0	Jun 26, 2020		Soil	M20-Jn50016		X								
109	TP07/1.0	Jun 26, 2020		Soil	M20-Jn50017		X								
110	TP08/1.0	Jun 26, 2020		Soil	M20-Jn50018		X								
111	TP09/1.0	Jun 26, 2020		Soil	M20-Jn50019		X								
112	TP10/0.5	Jun 26, 2020		Soil	M20-Jn50020		X								

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Company Name: Atma Environmental
Address: 56 William St
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VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
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Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
113	TP10/1.0	Jun 26, 2020		Soil	M20-Jn50021		X								
114	TP11/1.0	Jun 26, 2020		Soil	M20-Jn50022		X								
115	TP12/0.5	Jun 26, 2020		Soil	M20-Jn50023		X								
116	TP12/1.0	Jun 26, 2020		Soil	M20-Jn50024		X								
117	TP13/1.0	Jun 26, 2020		Soil	M20-Jn50025		X								
118	TP14/1.0	Jun 26, 2020		Soil	M20-Jn50026		X								
119	DUP-240620B	Jun 26, 2020		Soil	M20-Jn50027		X								
120	DUP-260620C	Jun 26, 2020		Soil	M20-Jn50028		X								
Test Counts						6	37	10	34	74	81	4	5	18	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Bifenthrin	mg/kg	< 0.05			0.05	Pass	
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Triazines							
Atrazine	mg/kg	< 0.2			0.2	Pass	
Method Blank							
NEPM 2013 Acid Herbicides							
Picloram	mg/kg	< 0.5			0.5	Pass	
2.4-D	mg/kg	< 0.5			0.5	Pass	
2.4.5-T	mg/kg	< 0.5			0.5	Pass	
MCPA	mg/kg	< 0.5			0.5	Pass	
MCPB	mg/kg	< 0.5			0.5	Pass	
Mecoprop	mg/kg	< 0.5			0.5	Pass	
Method Blank							
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Mirex	mg/kg	< 0.01			0.01	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
NEPM 2013 Phenols							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Fluoride (Total)	mg/kg	< 100			100	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Cyanide (total)	mg/kg	< 5			5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 0.2			0.2	Pass	
Silver	mg/kg	< 0.2			0.2	Pass	
Tin	mg/kg	< 10			10	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Volatile Organics							
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	111			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	89			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	89			70-130	Pass	
m&p-Xylenes	%	88			70-130	Pass	
Xylenes - Total*	%	90			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	112			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH >C10-C16	%	104			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	75			70-130	Pass	
Acenaphthylene	%	76			70-130	Pass	
Anthracene	%	70			70-130	Pass	
Benz(a)anthracene	%	86			70-130	Pass	
Benzo(a)pyrene	%	71			70-130	Pass	
Benzo(b&j)fluoranthene	%	73			70-130	Pass	
Benzo(g.h.i)perylene	%	96			70-130	Pass	
Benzo(k)fluoranthene	%	79			70-130	Pass	
Chrysene	%	87			70-130	Pass	
Dibenz(a.h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	70			70-130	Pass	
Fluorene	%	76			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	79			70-130	Pass	
Naphthalene	%	78			70-130	Pass	
Phenanthrene	%	71			70-130	Pass	
Pyrene	%	99			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Bifenthrin	%	108			70-130	Pass	
Chlordanes - Total	%	96			70-130	Pass	
4.4'-DDD	%	106			70-130	Pass	
4.4'-DDE	%	103			70-130	Pass	
4.4'-DDT	%	85			70-130	Pass	
a-BHC	%	101			70-130	Pass	
Aldrin	%	96			70-130	Pass	
b-BHC	%	98			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	85			70-130	Pass	
Endosulfan I	%	85			70-130	Pass	
Endosulfan II	%	92			70-130	Pass	
Endosulfan sulphate	%	84			70-130	Pass	
Endrin	%	100			70-130	Pass	
Endrin aldehyde	%	77			70-130	Pass	
Endrin ketone	%	95			70-130	Pass	
g-BHC (Lindane)	%	110			70-130	Pass	
Heptachlor	%	93			70-130	Pass	
Heptachlor epoxide	%	90			70-130	Pass	
Hexachlorobenzene	%	99			70-130	Pass	
Methoxychlor	%	87			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	78			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Acid Herbicides							
Picloram	%	90			70-130	Pass	
2.4-D	%	78			70-130	Pass	
2.4.5-T	%	77			70-130	Pass	
MCPA	%	74			70-130	Pass	
MCPB	%	80			70-130	Pass	
Mecoprop	%	75			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Organochlorine Pesticides							
Endosulfan sulphate	%	98			70-130	Pass	
Mirex	%	79			70-130	Pass	
4.4'-DDD	%	74			70-130	Pass	
4.4'-DDE	%	86			70-130	Pass	
4.4'-DDT	%	78			70-130	Pass	
Aldrin	%	84			70-130	Pass	
Chlordanes - Total	%	86			70-130	Pass	
Dieldrin	%	100			70-130	Pass	
Endosulfan I	%	99			70-130	Pass	
Endosulfan II	%	77			70-130	Pass	
Endrin	%	76			70-130	Pass	
Heptachlor	%	82			70-130	Pass	
Hexachlorobenzene	%	84			70-130	Pass	
Methoxychlor	%	76			70-130	Pass	
LCS - % Recovery							
NEPM 2013 Phenols							
2-Methylphenol (o-Cresol)	%	90			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	102			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	63			30-130	Pass	
Phenol	%	95			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	112			70-130	Pass	
Fluoride (Total)	%	104			70-130	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	100			70-130	Pass	
Cyanide (total)	%	105			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Arsenic	%	105			80-120	Pass	
Arsenic	%	107			80-120	Pass	
Barium	%	102			80-120	Pass	
Beryllium	%	98			80-120	Pass	
Beryllium	%	100			80-120	Pass	
Boron	%	106			80-120	Pass	
Boron	%	108			80-120	Pass	
Cadmium	%	95			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	104			80-120	Pass	
Chromium	%	104			80-120	Pass	
Chromium	%	106			80-120	Pass	
Cobalt	%	105			80-120	Pass	
Cobalt	%	108			80-120	Pass	
Copper	%	106			80-120	Pass	
Copper	%	108			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	109			80-120	Pass	
Lead	%	112			80-120	Pass	
Lead	%	117			80-120	Pass	
Manganese	%	102			80-120	Pass	
Manganese	%	104			80-120	Pass	
Mercury	%	98			75-125	Pass	
Mercury	%	100			75-125	Pass	
Mercury	%	102			75-125	Pass	
Molybdenum	%	100			80-120	Pass	
Molybdenum	%	101			80-120	Pass	
Nickel	%	101			80-120	Pass	
Nickel	%	105			80-120	Pass	
Nickel	%	107			80-120	Pass	
Selenium	%	98			80-120	Pass	
Selenium	%	96			80-120	Pass	
Selenium	%	101			80-120	Pass	
Silver	%	99			80-120	Pass	
Silver	%	98			80-120	Pass	
Tin	%	101			80-120	Pass	
Tin	%	100			80-120	Pass	
Zinc	%	103			80-120	Pass	
Zinc	%	106			80-120	Pass	
Zinc	%	110			80-120	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	104			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1.1-Trichloroethane			%	87			70-130	Pass	
1.2-Dichlorobenzene			%	86			70-130	Pass	
1.2-Dichloroethane			%	91			70-130	Pass	
Trichloroethene			%	87			70-130	Pass	
LCS - % Recovery									
Phenols (Halogenated)									
2-Chlorophenol			%	73			30-130	Pass	
2.4-Dichlorophenol			%	87			30-130	Pass	
2.4.5-Trichlorophenol			%	86			30-130	Pass	
2.4.6-Trichlorophenol			%	87			30-130	Pass	
2.6-Dichlorophenol			%	79			30-130	Pass	
4-Chloro-3-methylphenol			%	75			30-130	Pass	
Pentachlorophenol			%	77			30-130	Pass	
Tetrachlorophenols - Total			%	90			30-130	Pass	
LCS - % Recovery									
Phenols (non-Halogenated)									
2-Cyclohexyl-4.6-dinitrophenol			%	82			30-130	Pass	
2-Methyl-4.6-dinitrophenol			%	90			30-130	Pass	
2-Methylphenol (o-Cresol)			%	87			30-130	Pass	
2-Nitrophenol			%	77			30-130	Pass	
2.4-Dimethylphenol			%	124			30-130	Pass	
2.4-Dinitrophenol			%	76			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)			%	89			30-130	Pass	
4-Nitrophenol			%	97			30-130	Pass	
Dinoseb			%	84			30-130	Pass	
Phenol			%	90			30-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M20-Jn45181	NCP	%	114			70-130	Pass	
Acenaphthylene	M20-Jn45181	NCP	%	117			70-130	Pass	
Anthracene	M20-Jn45181	NCP	%	120			70-130	Pass	
Benz(a)anthracene	M20-Jn45181	NCP	%	120			70-130	Pass	
Benzo(a)pyrene	M20-Jn45181	NCP	%	118			70-130	Pass	
Benzo(b&j)fluoranthene	M20-Jn45181	NCP	%	112			70-130	Pass	
Benzo(g.h.i)perylene	M20-Jn45181	NCP	%	126			70-130	Pass	
Benzo(k)fluoranthene	M20-Jn45181	NCP	%	109			70-130	Pass	
Chrysene	M20-Jn45181	NCP	%	121			70-130	Pass	
Dibenz(a.h)anthracene	M20-Jn45181	NCP	%	121			70-130	Pass	
Fluoranthene	M20-Jn45181	NCP	%	124			70-130	Pass	
Fluorene	M20-Jn45181	NCP	%	118			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn45181	NCP	%	112			70-130	Pass	
Naphthalene	M20-Jn45181	NCP	%	106			70-130	Pass	
Phenanthrene	M20-Jn45181	NCP	%	117			70-130	Pass	
Pyrene	M20-Jn45181	NCP	%	127			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Acid Herbicides				Result 1					
Picloram	M20-Jl00128	NCP	%	89			70-130	Pass	
2.4-D	M20-Jl00128	NCP	%	76			70-130	Pass	
MCPA	M20-Jl00128	NCP	%	72			70-130	Pass	
MCPB	M20-Jl00128	NCP	%	63			70-130	Fail	Q08
Spike - % Recovery									
NEPM 2013 Phenols				Result 1					
2-Methylphenol (o-Cresol)	M20-Jn45181	NCP	%	94			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
3&4-Methylphenol (m&p-Cresol)	M20-Jn45181	NCP	%	92			30-130	Pass	
Pentachlorophenol	M20-Jn45181	NCP	%	81			30-130	Pass	
Phenol	M20-Jn45181	NCP	%	94			30-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	M20-Jn51255	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Jn49915	CP	%	125			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Jn49915	CP	%	120			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Jn49917	CP	%	83			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Jn49917	CP	%	87			70-130	Pass	
Toluene	M20-Jn49917	CP	%	87			70-130	Pass	
Ethylbenzene	M20-Jn49917	CP	%	83			70-130	Pass	
m&p-Xylenes	M20-Jn49917	CP	%	81			70-130	Pass	
o-Xylene	M20-Jn49917	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Jn49917	CP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Jn49917	CP	%	87			70-130	Pass	
TRH C6-C10	M20-Jn49917	CP	%	80			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn49921	CP	%	89			75-125	Pass	
Barium	M20-Jn49921	CP	%	111			75-125	Pass	
Beryllium	M20-Jn49921	CP	%	100			75-125	Pass	
Boron	M20-Jn49921	CP	%	96			75-125	Pass	
Cadmium	M20-Jn49921	CP	%	94			75-125	Pass	
Chromium	M20-Jn49921	CP	%	102			75-125	Pass	
Cobalt	M20-Jn49921	CP	%	103			75-125	Pass	
Copper	M20-Jn49921	CP	%	103			75-125	Pass	
Lead	M20-Jn49921	CP	%	107			75-125	Pass	
Manganese	M20-Jn49921	CP	%	109			75-125	Pass	
Mercury	M20-Jn49921	CP	%	99			70-130	Pass	
Molybdenum	M20-Jn49921	CP	%	102			75-125	Pass	
Nickel	M20-Jn49921	CP	%	102			75-125	Pass	
Selenium	M20-Jn49921	CP	%	88			75-125	Pass	
Silver	M20-Jn49921	CP	%	95			75-125	Pass	
Tin	M20-Jn49921	CP	%	104			75-125	Pass	
Zinc	M20-Jn49921	CP	%	103			75-125	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Bifenthrin	M20-Jn49924	CP	%	98			70-130	Pass	
Chlordanes - Total	M20-Jn49924	CP	%	84			70-130	Pass	
4.4'-DDD	M20-Jn49924	CP	%	124			70-130	Pass	
4.4'-DDE	M20-Jn49924	CP	%	100			70-130	Pass	
a-BHC	M20-Jn49924	CP	%	97			70-130	Pass	
Aldrin	M20-Jn49924	CP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
b-BHC	M20-Jn49924	CP	%	94			70-130	Pass	
d-BHC	M20-Jn49924	CP	%	76			70-130	Pass	
Dieldrin	M20-Jn49924	CP	%	111			70-130	Pass	
Endosulfan I	M20-Jn49924	CP	%	93			70-130	Pass	
Endosulfan II	M20-Jn49924	CP	%	71			70-130	Pass	
Endosulfan sulphate	M20-Jn49924	CP	%	96			70-130	Pass	
Endrin aldehyde	M20-Jn49924	CP	%	100			70-130	Pass	
Endrin ketone	M20-Jn49924	CP	%	71			70-130	Pass	
g-BHC (Lindane)	M20-Jn49924	CP	%	113			70-130	Pass	
Heptachlor	M20-Jn49924	CP	%	100			70-130	Pass	
Heptachlor epoxide	M20-Jn49924	CP	%	102			70-130	Pass	
Hexachlorobenzene	M20-Jn49924	CP	%	80			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Organochlorine Pesticides				Result 1					
Mirex	M20-Jn49924	CP	%	122			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn49931	CP	%	100			75-125	Pass	
Barium	M20-Jn49931	CP	%	112			75-125	Pass	
Beryllium	M20-Jn49931	CP	%	97			75-125	Pass	
Boron	M20-Jn49931	CP	%	101			75-125	Pass	
Cadmium	M20-Jn49931	CP	%	95			75-125	Pass	
Chromium	M20-Jn49931	CP	%	103			75-125	Pass	
Cobalt	M20-Jn49931	CP	%	102			75-125	Pass	
Copper	M20-Jn49931	CP	%	98			75-125	Pass	
Lead	M20-Jn49931	CP	%	107			75-125	Pass	
Manganese	M20-Jn49931	CP	%	94			75-125	Pass	
Mercury	M20-Jn49931	CP	%	98			70-130	Pass	
Molybdenum	M20-Jn49931	CP	%	104			75-125	Pass	
Nickel	M20-Jn49931	CP	%	102			75-125	Pass	
Selenium	M20-Jn49931	CP	%	97			75-125	Pass	
Silver	M20-Jn49931	CP	%	97			75-125	Pass	
Tin	M20-Jn49931	CP	%	103			75-125	Pass	
Zinc	M20-Jn49931	CP	%	99			75-125	Pass	
Spike - % Recovery									
				Result 1					
Fluoride (Total)	M20-Jn49957	CP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Jn49959	CP	%	84			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Jn49959	CP	%	91			70-130	Pass	
Toluene	M20-Jn49959	CP	%	90			70-130	Pass	
Ethylbenzene	M20-Jn49959	CP	%	86			70-130	Pass	
m&p-Xylenes	M20-Jn49959	CP	%	85			70-130	Pass	
o-Xylene	M20-Jn49959	CP	%	91			70-130	Pass	
Xylenes - Total*	M20-Jn49959	CP	%	87			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Jn49959	CP	%	86			70-130	Pass	
TRH C6-C10	M20-Jn49959	CP	%	82			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1016	M20-Jn49959	CP	%	94			70-130	Pass	
Aroclor-1260	M20-Jn49959	CP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn49963	CP	%	89			75-125	Pass	
Barium	M20-Jn49963	CP	%	117			75-125	Pass	
Beryllium	M20-Jn49963	CP	%	100			75-125	Pass	
Boron	M20-Jn49963	CP	%	93			75-125	Pass	
Cadmium	M20-Jn49963	CP	%	96			75-125	Pass	
Chromium	M20-Jn49963	CP	%	106			75-125	Pass	
Cobalt	M20-Jn49963	CP	%	107			75-125	Pass	
Copper	M20-Jn49963	CP	%	104			75-125	Pass	
Lead	M20-Jn49963	CP	%	106			75-125	Pass	
Manganese	M20-Jn49963	CP	%	83			75-125	Pass	
Mercury	M20-Jn49963	CP	%	97			70-130	Pass	
Molybdenum	M20-Jn49963	CP	%	105			75-125	Pass	
Nickel	M20-Jn49963	CP	%	118			75-125	Pass	
Selenium	M20-Jn49963	CP	%	88			75-125	Pass	
Silver	M20-Jn49963	CP	%	96			75-125	Pass	
Tin	M20-Jn49963	CP	%	108			75-125	Pass	
Zinc	M20-Jn49963	CP	%	108			75-125	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Bifenthrin	M20-Jn49967	CP	%	105			70-130	Pass	
Chlordanes - Total	M20-Jn49967	CP	%	97			70-130	Pass	
4.4'-DDD	M20-Jn49967	CP	%	129			70-130	Pass	
4.4'-DDE	M20-Jn49967	CP	%	126			70-130	Pass	
4.4'-DDT	M20-Jn49967	CP	%	78			70-130	Pass	
a-BHC	M20-Jn49967	CP	%	74			70-130	Pass	
Aldrin	M20-Jn49967	CP	%	106			70-130	Pass	
b-BHC	M20-Jn49967	CP	%	122			70-130	Pass	
d-BHC	M20-Jn49967	CP	%	89			70-130	Pass	
Dieldrin	M20-Jn49967	CP	%	111			70-130	Pass	
Endosulfan I	M20-Jn49967	CP	%	126			70-130	Pass	
Endosulfan II	M20-Jn49967	CP	%	116			70-130	Pass	
Endosulfan sulphate	M20-Jn49967	CP	%	96			70-130	Pass	
Endrin	M20-Jn49967	CP	%	119			70-130	Pass	
Endrin aldehyde	M20-Jn49967	CP	%	128			70-130	Pass	
Endrin ketone	M20-Jn49967	CP	%	123			70-130	Pass	
g-BHC (Lindane)	M20-Jn49967	CP	%	117			70-130	Pass	
Heptachlor	M20-Jn49967	CP	%	114			70-130	Pass	
Heptachlor epoxide	M20-Jn49967	CP	%	113			70-130	Pass	
Hexachlorobenzene	M20-Jn49967	CP	%	95			70-130	Pass	
Methoxychlor	M20-Jn49967	CP	%	81			70-130	Pass	
Spike - % Recovery									
NEPM 2013 Organochlorine Pesticides				Result 1					
Mirex	M20-Jn49967	CP	%	125			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M20-Jl03983	NCP	%	92			30-130	Pass	
2.4-Dichlorophenol	M20-Jl03983	NCP	%	87			30-130	Pass	
2.4.5-Trichlorophenol	M20-Jl03983	NCP	%	88			30-130	Pass	
2.4.6-Trichlorophenol	M20-Jl03983	NCP	%	82			30-130	Pass	
2.6-Dichlorophenol	M20-Jl03983	NCP	%	85			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	M20-Jl03983	NCP	%	74			30-130	Pass	
Tetrachlorophenols - Total	M20-Jl03983	NCP	%	90			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M20-Jl03983	NCP	%	74			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jl03983	NCP	%	80			30-130	Pass	
2-Nitrophenol	M20-Jl03983	NCP	%	95			30-130	Pass	
2.4-Dimethylphenol	M20-Jl03983	NCP	%	121			30-130	Pass	
2.4-Dinitrophenol	M20-Jl03983	NCP	%	74			30-130	Pass	
4-Nitrophenol	M20-Jl03983	NCP	%	85			30-130	Pass	
Dinoseb	M20-Jl03983	NCP	%	83			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn49983	CP	%	87			75-125	Pass	
Beryllium	M20-Jn49983	CP	%	98			75-125	Pass	
Boron	M20-Jn49983	CP	%	85			75-125	Pass	
Cadmium	M20-Jn49983	CP	%	91			75-125	Pass	
Chromium	M20-Jn49983	CP	%	95			75-125	Pass	
Cobalt	M20-Jn49983	CP	%	107			75-125	Pass	
Copper	M20-Jn49983	CP	%	99			75-125	Pass	
Lead	M20-Jn49983	CP	%	104			75-125	Pass	
Manganese	M20-Jn49983	CP	%	81			75-125	Pass	
Mercury	M20-Jn49983	CP	%	95			70-130	Pass	
Molybdenum	M20-Jn49983	CP	%	103			75-125	Pass	
Nickel	M20-Jn49983	CP	%	107			75-125	Pass	
Selenium	M20-Jn49983	CP	%	93			75-125	Pass	
Silver	M20-Jn49983	CP	%	93			75-125	Pass	
Tin	M20-Jn49983	CP	%	107			75-125	Pass	
Zinc	M20-Jn49983	CP	%	94			75-125	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M20-Jn48989	NCP	%	77			70-130	Pass	
1.1.1-Trichloroethane	M20-Jn48989	NCP	%	75			70-130	Pass	
1.2-Dichlorobenzene	M20-Jn48989	NCP	%	93			70-130	Pass	
1.2-Dichloroethane	M20-Jn48989	NCP	%	91			70-130	Pass	
Trichloroethene	M20-Jn48989	NCP	%	76			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
NEPM 2013 Acid Herbicides				Result 1	Result 2	RPD			
Picloram	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-D	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-T	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPA	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
MCPB	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Mecoprop	S20-Jn44996	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M20-Jn51252	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	M20-Jn49911	CP	pH Units	4.8	4.6	pass	30%	Pass	
% Moisture	N20-Jn45503	NCP	%	14	15	5.0	30%	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Jn49911	CP	uS/cm	370	300	20	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M20-Jn49911	CP	pH Units	5.1	5.0	pass	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Jn49912	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Jn49912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Jn49912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Jn49912	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Jn49912	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Jn49912	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Jn49915	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Jn49915	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Jn49915	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Jn49915	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Jn49915	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Jn49915	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Jn49915	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Jn49915	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Jn49915	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Barium	M20-Jn49920	CP	mg/kg	29	30	4.0	30%	Pass	
Beryllium	M20-Jn49920	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49920	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49920	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49920	CP	mg/kg	41	37	9.0	30%	Pass	
Cobalt	M20-Jn49920	CP	mg/kg	< 5	6.5	33	30%	Fail	Q15
Copper	M20-Jn49920	CP	mg/kg	5.7	7.5	27	30%	Pass	
Manganese	M20-Jn49920	CP	mg/kg	24	31	26	30%	Pass	
Mercury	M20-Jn49920	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49920	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49920	CP	mg/kg	8.7	12	28	30%	Pass	
Selenium	M20-Jn49920	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49920	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49920	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49921	CP	mg/kg	4.1	4.0	1.0	30%	Pass	
Barium	M20-Jn49921	CP	mg/kg	67	67	1.0	30%	Pass	
Beryllium	M20-Jn49921	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49921	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49921	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49921	CP	mg/kg	19	20	2.0	30%	Pass	
Cobalt	M20-Jn49921	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M20-Jn49921	CP	mg/kg	7.7	7.9	3.0	30%	Pass	
Lead	M20-Jn49921	CP	mg/kg	17	18	2.0	30%	Pass	
Manganese	M20-Jn49921	CP	mg/kg	75	77	2.0	30%	Pass	
Mercury	M20-Jn49921	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49921	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49921	CP	mg/kg	6.4	6.5	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Selenium	M20-Jn49921	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49921	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49921	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49921	CP	mg/kg	40	41	3.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Bifenthrin	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlordanes - Total	M20-Jn49923	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn49923	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Chlorpyrifos	M20-Jn49923	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Atrazine	M20-Jn49923	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD			
Mirex	M20-Jn49923	CP	mg/kg	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
NEPM 2013 Phenols				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	M20-Jn49923	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Jn49923	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Pentachlorophenol	M20-Jn49923	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Jn49923	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Jn49923	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Jn49923	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M20-Jn49923	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M20-Jn49923	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jn49923	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M20-Jn49923	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M20-Jn49923	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Jn49923	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	M20-Jn49923	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M20-Jn49923	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Bifenthrin	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlordanes - Total	M20-Jn49930	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn49930	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Chlorpyrifos	M20-Jn49930	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Atrazine	M20-Jn49930	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD			
Mirex	M20-Jn49930	CP	mg/kg	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
NEPM 2013 Phenols				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	M20-Jn49930	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Jn49930	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Pentachlorophenol	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49930	CP	mg/kg	4.0	4.3	6.0	30%	Pass	
Barium	M20-Jn49930	CP	mg/kg	100	130	23	30%	Pass	
Beryllium	M20-Jn49930	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49930	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49930	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49930	CP	mg/kg	23	27	16	30%	Pass	
Cobalt	M20-Jn49930	CP	mg/kg	11	12	12	30%	Pass	
Copper	M20-Jn49930	CP	mg/kg	15	18	20	30%	Pass	
Lead	M20-Jn49930	CP	mg/kg	12	13	11	30%	Pass	
Manganese	M20-Jn49930	CP	mg/kg	240	270	13	30%	Pass	
Mercury	M20-Jn49930	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49930	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49930	CP	mg/kg	25	27	9.0	30%	Pass	
Selenium	M20-Jn49930	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49930	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49930	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49930	CP	mg/kg	55	62	12	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M20-Jn49930	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M20-Jn49930	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jn49930	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M20-Jn49930	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M20-Jn49930	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Jn49930	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	M20-Jn49930	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M20-Jn49930	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49931	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Barium	M20-Jn49931	CP	mg/kg	43	44	1.0	30%	Pass	
Beryllium	M20-Jn49931	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49931	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49931	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49931	CP	mg/kg	37	37	1.0	30%	Pass	
Cobalt	M20-Jn49931	CP	mg/kg	18	18	2.0	30%	Pass	
Copper	M20-Jn49931	CP	mg/kg	21	21	<1	30%	Pass	
Lead	M20-Jn49931	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M20-Jn49931	CP	mg/kg	290	290	1.0	30%	Pass	
Mercury	M20-Jn49931	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49931	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49931	CP	mg/kg	96	98	2.0	30%	Pass	
Selenium	M20-Jn49931	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49931	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49931	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49931	CP	mg/kg	46	47	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Beryllium	M20-Jn49940	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49940	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49940	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49940	CP	mg/kg	42	35	17	30%	Pass	
Cobalt	M20-Jn49940	CP	mg/kg	11	8.5	25	30%	Pass	
Copper	M20-Jn49940	CP	mg/kg	16	13	23	30%	Pass	
Mercury	M20-Jn49940	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49940	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Selenium	M20-Jn49940	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49940	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49940	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49940	CP	mg/kg	40	30	28	30%	Pass	
Duplicate									
Cation Exchange Capacity				Result 1	Result 2	RPD			
Cation Exchange Capacity	M20-Jn49941	CP	meq/100g	15	14	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Dibenz(a.h)anthracene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Bifenthrin	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Chlordanes - Total	M20-Jn49947	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Jn49947	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Chlorpyrifos	M20-Jn49947	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Atrazine	M20-Jn49947	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
NEPM 2013 Organochlorine Pesticides				Result 1	Result 2	RPD			
Mirex	M20-Jn49947	CP	mg/kg	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
NEPM 2013 Phenols				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	M20-Jn49947	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Jn49947	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Pentachlorophenol	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M20-Jn49947	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M20-Jn49947	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jn49947	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M20-Jn49947	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M20-Jn49947	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Jn49947	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	M20-Jn49947	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M20-Jn49947	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Jn49952	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Jn49952	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Jn49952	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Jn49952	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Jn49952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Jn49952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Jn49952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Jn49952	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Jn49952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Jn49952	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Jn49952	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Jn49952	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Jn49952	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Jn49952	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Jn49952	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Barium	M20-Jn49952	CP	mg/kg	27	29	7.0	30%	Pass	
Beryllium	M20-Jn49952	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49952	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49952	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49952	CP	mg/kg	21	15	30	30%	Pass	
Cobalt	M20-Jn49952	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	M20-Jn49952	CP	mg/kg	6.7	7.3	9.0	30%	Pass	
Lead	M20-Jn49952	CP	mg/kg	10.0	9.7	3.0	30%	Pass	
Manganese	M20-Jn49952	CP	mg/kg	52	54	3.0	30%	Pass	
Mercury	M20-Jn49952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49952	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49952	CP	mg/kg	< 5	5.2	10	30%	Pass	
Selenium	M20-Jn49952	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49952	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49952	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49952	CP	mg/kg	65	71	9.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Fluoride (Total)	M20-Jn49955	CP	mg/kg	170	130	23	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Barium	M20-Jn49962	CP	mg/kg	48	47	1.0	30%	Pass	
Beryllium	M20-Jn49962	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49962	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49962	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49962	CP	mg/kg	46	41	12	30%	Pass	
Cobalt	M20-Jn49962	CP	mg/kg	11	10	6.0	30%	Pass	
Copper	M20-Jn49962	CP	mg/kg	10	9.6	9.0	30%	Pass	
Lead	M20-Jn49962	CP	mg/kg	15	13	11	30%	Pass	
Manganese	M20-Jn49962	CP	mg/kg	220	200	9.0	30%	Pass	
Mercury	M20-Jn49962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49962	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49962	CP	mg/kg	20	19	6.0	30%	Pass	
Selenium	M20-Jn49962	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49962	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49962	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49962	CP	mg/kg	20	20	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49963	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Barium	M20-Jn49963	CP	mg/kg	61	66	8.0	30%	Pass	
Beryllium	M20-Jn49963	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49963	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49963	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49963	CP	mg/kg	52	56	7.0	30%	Pass	
Cobalt	M20-Jn49963	CP	mg/kg	24	26	9.0	30%	Pass	
Copper	M20-Jn49963	CP	mg/kg	14	16	9.0	30%	Pass	
Lead	M20-Jn49963	CP	mg/kg	9.0	9.8	9.0	30%	Pass	
Manganese	M20-Jn49963	CP	mg/kg	170	190	8.0	30%	Pass	
Mercury	M20-Jn49963	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49963	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49963	CP	mg/kg	53	58	8.0	30%	Pass	
Selenium	M20-Jn49963	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49963	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49963	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49963	CP	mg/kg	15	17	9.0	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1221	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1232	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1242	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1248	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1254	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Aroclor-1260	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Total PCB*	M20-Jn41275	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Barium	M20-Jn49972	CP	mg/kg	340	420	22	30%	Pass	
Beryllium	M20-Jn49972	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49972	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49972	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49972	CP	mg/kg	36	39	8.0	30%	Pass	
Cobalt	M20-Jn49972	CP	mg/kg	13	12	6.0	30%	Pass	
Lead	M20-Jn49972	CP	mg/kg	21	20	1.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Manganese	M20-Jn49972	CP	mg/kg	220	170	26	30%	Pass	
Mercury	M20-Jn49972	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49972	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49972	CP	mg/kg	29	22	25	30%	Pass	
Selenium	M20-Jn49972	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49972	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	M20-Jn51976	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49982	CP	mg/kg	5.1	4.9	3.0	30%	Pass	
Barium	M20-Jn49982	CP	mg/kg	350	370	4.0	30%	Pass	
Beryllium	M20-Jn49982	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49982	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M20-Jn49982	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49982	CP	mg/kg	33	34	3.0	30%	Pass	
Cobalt	M20-Jn49982	CP	mg/kg	6.5	6.9	5.0	30%	Pass	
Copper	M20-Jn49982	CP	mg/kg	11	11	3.0	30%	Pass	
Lead	M20-Jn49982	CP	mg/kg	23	24	3.0	30%	Pass	
Manganese	M20-Jn49982	CP	mg/kg	70	73	5.0	30%	Pass	
Mercury	M20-Jn49982	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49982	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49982	CP	mg/kg	13	13	2.0	30%	Pass	
Selenium	M20-Jn49982	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49982	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49982	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49982	CP	mg/kg	38	43	11	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
4-Methyl-2-pentanone (MIBK)	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M20-Jn51915	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M20-Jn50394	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Jn50394	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Jn50394	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Jn50394	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Jn50394	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Jn50394	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	M20-Jn50394	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M20-Jn50394	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M20-Jn50394	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	M20-Jn50394	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	M20-Jn50394	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Jn50394	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	M20-Jn50394	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	M20-Jn50394	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49983	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Barium	M20-Jn49983	CP	mg/kg	220	230	3.0	30%	Pass	
Beryllium	M20-Jn49983	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M20-Jn49983	CP	mg/kg	16	16	2.0	30%	Pass	
Cadmium	M20-Jn49983	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Jn49983	CP	mg/kg	39	40	3.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Cobalt	M20-Jn49983	CP	mg/kg	17	17	1.0	30%	Pass	
Copper	M20-Jn49983	CP	mg/kg	9.7	9.8	1.0	30%	Pass	
Lead	M20-Jn49983	CP	mg/kg	9.2	9.2	<1	30%	Pass	
Manganese	M20-Jn49983	CP	mg/kg	180	190	3.0	30%	Pass	
Mercury	M20-Jn49983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Molybdenum	M20-Jn49983	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Nickel	M20-Jn49983	CP	mg/kg	33	33	<1	30%	Pass	
Selenium	M20-Jn49983	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Silver	M20-Jn49983	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tin	M20-Jn49983	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Zinc	M20-Jn49983	CP	mg/kg	20	21	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Jn49991	CP	uS/cm	98	96	2.2	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	M20-Jn49991	CP	pH Units	8.6	8.5	pass	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Savini Suduweli	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Atma Environmental
56 William St
Abbotsford
VIC 3067

Attention: **Rory McPhillips**

Report **728529-W**
Project name CLARKEFIELD
Project ID 1894
Received Date Jun 29, 2020

Client Sample ID			**DECON-240620**	**DECON-250620**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M20-Jn49909**	**M20-Jn49910**
Date Sampled			**Jun 26, 2020**	**Jun 26, 2020**
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	0.001	mg/L	< 0.001	< 0.001
Barium	0.02	mg/L	< 0.02	< 0.02
Beryllium	0.001	mg/L	< 0.001	< 0.001
Boron	0.05	mg/L	< 0.05	< 0.05
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001
Cobalt	0.001	mg/L	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001
Manganese	0.005	mg/L	< 0.005	< 0.005
Mercury	0.0001	mg/L	< 0.0001	< 0.0001
Molybdenum	0.005	mg/L	< 0.005	< 0.005
Nickel	0.001	mg/L	< 0.001	< 0.001
Selenium	0.001	mg/L	< 0.001	< 0.001
Silver	0.005	mg/L	< 0.005	< 0.005
Tin	0.005	mg/L	< 0.005	< 0.005
Zinc	0.005	mg/L	< 0.005	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
VIC EPA Metals : Metals M17	Melbourne	Jun 30, 2020	180 Days

- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS

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NATA # 1261 Site # 20794

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IANZ # 1290

Company Name: Atma Environmental
Address: 56 William St
Abbotsford
VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	DECON-240620	Jun 26, 2020		Water	M20-Jn49909					X					
2	DECON-250620	Jun 26, 2020		Water	M20-Jn49910					X					
3	BH01/0.1	Jun 26, 2020		Soil	M20-Jn49911			X			X		X		
4	BH02/0.1	Jun 26, 2020		Soil	M20-Jn49912				X	X	X			X	
5	BH02/0.5	Jun 26, 2020		Soil	M20-Jn49913				X	X	X				
6	BH03/0.1	Jun 26, 2020		Soil	M20-Jn49914					X	X				
7	BH04/0.1	Jun 26, 2020		Soil	M20-Jn49915				X	X	X			X	
8	BH04/0.5	Jun 26, 2020		Soil	M20-Jn49916					X	X				
9	BH05/0.1	Jun 26, 2020		Soil	M20-Jn49917						X		X		

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Company Name: Atma Environmental
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VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
10	BH06/0.1	Jun 26, 2020		Soil	M20-Jn49918			X	X	X	X			X	
11	BH06/0.5	Jun 26, 2020		Soil	M20-Jn49919					X	X				
12	BH07/0.1	Jun 26, 2020		Soil	M20-Jn49920					X	X				
13	BH08/0.1	Jun 26, 2020		Soil	M20-Jn49921			X		X	X				
14	BH08/0.5	Jun 26, 2020		Soil	M20-Jn49922					X	X				
15	BH09/0.1	Jun 26, 2020		Soil	M20-Jn49923				X	X	X				
16	BH09/0.5	Jun 26, 2020		Soil	M20-Jn49924				X	X	X				
17	BH10/0.1	Jun 26, 2020		Soil	M20-Jn49925					X	X				
18	BH10/0.5	Jun 26, 2020		Soil	M20-Jn49926					X	X				
19	BH11/0.1	Jun 26, 2020		Soil	M20-Jn49927				X	X	X			X	
20	BH12/0.1	Jun 26, 2020		Soil	M20-Jn49928			X		X	X				
21	BH12/0.5	Jun 26, 2020		Soil	M20-Jn49929					X	X				
22	BH13/0.1	Jun 26, 2020		Soil	M20-Jn49930	X					X		X		

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Address: 56 William St
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VIC 3067

Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Fluoride (Total)	HOLD	pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Organochlorine Pesticides	VIC EPA Metals : Metals M17	Moisture Set	Cation Exchange Capacity	NEPM Screen Table 1(A) HIL's for Soil Contaminants - Basic Suite - Excluding	Eurofins | mgt Suite B4	Vic EPA IWRG 621 (Solids)
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
23	BH14/0.1	Jun 26, 2020		Soil	M20-Jn49931				X	X	X				
24	BH14/0.5	Jun 26, 2020		Soil	M20-Jn49932					X	X				
25	BH15/0.1	Jun 26, 2020		Soil	M20-Jn49933			X		X	X			X	
26	BH16/0.1	Jun 26, 2020		Soil	M20-Jn49934				X	X	X				
27	BH16/0.5	Jun 26, 2020		Soil	M20-Jn49935					X	X				
28	BH17/0.1	Jun 26, 2020		Soil	M20-Jn49936					X	X				
29	BH18/0.1	Jun 26, 2020		Soil	M20-Jn49937				X	X	X				
30	BH18/0.5	Jun 26, 2020		Soil	M20-Jn49938				X	X	X				
31	BH19/0.1	Jun 26, 2020		Soil	M20-Jn49939					X	X			X	
32	BH19/0.5	Jun 26, 2020		Soil	M20-Jn49940					X	X				
33	BH20/0.1	Jun 26, 2020		Soil	M20-Jn49941			X	X	X	X	X		X	
34	BH20/0.5	Jun 26, 2020		Soil	M20-Jn49942				X	X	X				
35	BH21/0.1	Jun 26, 2020		Soil	M20-Jn49943					X	X				

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Project Name: CLARKEFIELD
Project ID: 1894

Order No.:
Report #: 728529
Phone: 9429 6955
Fax: 9429 5911

Received: Jun 29, 2020 5:10 PM
Due: Jul 6, 2020
Priority: 5 Day
Contact Name: Rory McPhillips

Eurofins Analytical Services Manager : Savini Suduweli

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
36	BH21/0.5	Jun 26, 2020		Soil	M20-Jn49944					X	X				
37	BH22/0.1	Jun 26, 2020		Soil	M20-Jn49945					X	X				
38	BH23/0.1	Jun 26, 2020		Soil	M20-Jn49946				X	X	X			X	
39	BH23/0.5	Jun 26, 2020		Soil	M20-Jn49947				X		X				
40	BH24/0.1	Jun 26, 2020		Soil	M20-Jn49948					X	X				
41	BH24/0.5	Jun 26, 2020		Soil	M20-Jn49949					X	X				
42	BH25/0.1	Jun 26, 2020		Soil	M20-Jn49950				X	X	X				
43	BH25/0.5	Jun 26, 2020		Soil	M20-Jn49951				X		X				
44	BH26/0.1	Jun 26, 2020		Soil	M20-Jn49952					X	X			X	
45	TP01/0.1	Jun 26, 2020		Soil	M20-Jn49953	X		X	X	X	X	X			
46	TP01/0.5	Jun 26, 2020		Soil	M20-Jn49954					X	X				
47	TP02/0.1	Jun 26, 2020		Soil	M20-Jn49955	X			X	X	X				
48	TP02/0.5	Jun 26, 2020		Soil	M20-Jn49956					X	X				

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
49	TP03/0.1	Jun 26, 2020		Soil	M20-Jn49957	X			X	X	X			X	
50	TP03/0.5	Jun 26, 2020		Soil	M20-Jn49958					X	X				
51	TP04/0.1	Jun 26, 2020		Soil	M20-Jn49959			X	X		X	X	X		
52	TP05/0.1	Jun 26, 2020		Soil	M20-Jn49960				X	X	X			X	
53	TP05/0.5	Jun 26, 2020		Soil	M20-Jn49961					X	X				
54	TP06/0.1	Jun 26, 2020		Soil	M20-Jn49962				X	X	X			X	
55	TP06/0.5	Jun 26, 2020		Soil	M20-Jn49963				X	X	X				
56	TP07/0.1	Jun 26, 2020		Soil	M20-Jn49964					X	X				
57	TP07/0.5	Jun 26, 2020		Soil	M20-Jn49965					X	X				
58	TP08/0.1	Jun 26, 2020		Soil	M20-Jn49966				X	X	X			X	
59	TP08/0.5	Jun 26, 2020		Soil	M20-Jn49967				X	X	X				
60	TP09/0.1	Jun 26, 2020		Soil	M20-Jn49968					X	X				
61	TP09/0.5	Jun 26, 2020		Soil	M20-Jn49969					X	X				

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
62	TP10/0.1	Jun 26, 2020		Soil	M20-Jn49970				X	X	X			X	
63	TP11/0.1	Jun 26, 2020		Soil	M20-Jn49971	X				X	X			X	
64	TP11/0.5	Jun 26, 2020		Soil	M20-Jn49972					X	X				
65	TP12/0.1	Jun 26, 2020		Soil	M20-Jn49973						X		X		
66	TP13/0.1	Jun 26, 2020		Soil	M20-Jn49974			X	X	X	X				
67	TP13/0.5	Jun 26, 2020		Soil	M20-Jn49975				X	X	X				
68	TP14/0.1	Jun 26, 2020		Soil	M20-Jn49976	X		X	X	X	X	X			
69	TP14/0.5	Jun 26, 2020		Soil	M20-Jn49977				X	X	X				
70	DUP-240620A	Jun 26, 2020		Soil	M20-Jn49978				X	X	X			X	
71	DUP-250620	Jun 26, 2020		Soil	M20-Jn49979				X	X	X			X	
72	DUP-260620A	Jun 26, 2020		Soil	M20-Jn49980				X	X	X			X	
73	DUP-260620B	Jun 26, 2020		Soil	M20-Jn49981					X	X				
74	SP1-1	Jun 26, 2020		Soil	M20-Jn49982						X				X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
75	SP1-2	Jun 26, 2020		Soil	M20-Jn49983					X	X				
76	SP1-3	Jun 26, 2020		Soil	M20-Jn49984					X	X				
77	SP1-4	Jun 26, 2020		Soil	M20-Jn49985					X	X				
78	SP1-5	Jun 26, 2020		Soil	M20-Jn49986					X	X				
79	SP1-6	Jun 26, 2020		Soil	M20-Jn49987					X	X				
80	SP1-7	Jun 26, 2020		Soil	M20-Jn49988					X	X				
81	SP1-8	Jun 26, 2020		Soil	M20-Jn49989					X	X				
82	SP1-9	Jun 26, 2020		Soil	M20-Jn49990					X	X				
83	SP1-10	Jun 26, 2020		Soil	M20-Jn49991						X				X
84	TRIP-240620	Jun 26, 2020		Water	M20-Jn49992		X								
85	TRIP-250620	Jun 26, 2020		Water	M20-Jn49993		X								
86	TRIP-260620	Jun 26, 2020		Water	M20-Jn49994		X								
87	FIELD-240620	Jun 26, 2020		Water	M20-Jn49995		X								

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
88	FIELD-250620	Jun 26, 2020		Water	M20-Jn49996		X								
89	FIELD-260620	Jun 26, 2020		Water	M20-Jn49997		X								
90	DECON-260620	Jun 26, 2020		Water	M20-Jn49998		X								
91	BH01/0.5	Jun 26, 2020		Soil	M20-Jn49999		X								
92	BH03/0.5	Jun 26, 2020		Soil	M20-Jn50000		X								
93	BH05/0.5	Jun 26, 2020		Soil	M20-Jn50001		X								
94	BH07/0.5	Jun 26, 2020		Soil	M20-Jn50002		X								
95	BH11/0.5	Jun 26, 2020		Soil	M20-Jn50003		X								
96	BH13/0.5	Jun 26, 2020		Soil	M20-Jn50004		X								
97	BH15/0.5	Jun 26, 2020		Soil	M20-Jn50005		X								
98	BH17/0.5	Jun 26, 2020		Soil	M20-Jn50006		X								
99	BH22/0.5	Jun 26, 2020		Soil	M20-Jn50007		X								

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Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
100	BH26/0.5	Jun 26, 2020		Soil	M20-Jn50008		X								
101	TP01/1.0	Jun 26, 2020		Soil	M20-Jn50009		X								
102	TP02/1.0	Jun 26, 2020		Soil	M20-Jn50010		X								
103	TP03/1.0	Jun 26, 2020		Soil	M20-Jn50011		X								
104	TP03/1.4	Jun 26, 2020		Soil	M20-Jn50012		X								
105	TP04/0.5	Jun 26, 2020		Soil	M20-Jn50013		X								
106	TP04/1.0	Jun 26, 2020		Soil	M20-Jn50014		X								
107	TP05/1.0	Jun 26, 2020		Soil	M20-Jn50015		X								
108	TP06/1.0	Jun 26, 2020		Soil	M20-Jn50016		X								
109	TP07/1.0	Jun 26, 2020		Soil	M20-Jn50017		X								
110	TP08/1.0	Jun 26, 2020		Soil	M20-Jn50018		X								
111	TP09/1.0	Jun 26, 2020		Soil	M20-Jn50019		X								
112	TP10/0.5	Jun 26, 2020		Soil	M20-Jn50020		X								

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Sydney Laboratory - NATA Site # 18217															
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Perth Laboratory - NATA Site # 23736															
113	TP10/1.0	Jun 26, 2020		Soil	M20-Jn50021		X								
114	TP11/1.0	Jun 26, 2020		Soil	M20-Jn50022		X								
115	TP12/0.5	Jun 26, 2020		Soil	M20-Jn50023		X								
116	TP12/1.0	Jun 26, 2020		Soil	M20-Jn50024		X								
117	TP13/1.0	Jun 26, 2020		Soil	M20-Jn50025		X								
118	TP14/1.0	Jun 26, 2020		Soil	M20-Jn50026		X								
119	DUP-240620B	Jun 26, 2020		Soil	M20-Jn50027		X								
120	DUP-260620C	Jun 26, 2020		Soil	M20-Jn50028		X								
Test Counts						6	37	10	34	74	81	4	5	18	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Barium	mg/L	< 0.02			0.02	Pass	
Beryllium	mg/L	< 0.001			0.001	Pass	
Boron	mg/L	< 0.05			0.05	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Cobalt	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Manganese	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Molybdenum	mg/L	< 0.005			0.005	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Selenium	mg/L	< 0.001			0.001	Pass	
Silver	mg/L	< 0.005			0.005	Pass	
Tin	mg/L	< 0.005			0.005	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Barium	%	102			80-120	Pass	
Beryllium	%	95			80-120	Pass	
Boron	%	110			80-120	Pass	
Cadmium	%	97			80-120	Pass	
Chromium	%	97			80-120	Pass	
Cobalt	%	99			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	99			80-120	Pass	
Manganese	%	101			80-120	Pass	
Mercury	%	93			75-125	Pass	
Molybdenum	%	96			80-120	Pass	
Nickel	%	98			80-120	Pass	
Selenium	%	98			80-120	Pass	
Silver	%	82			80-120	Pass	
Tin	%	101			80-120	Pass	
Zinc	%	99			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Jn49909	CP	%	100			75-125	Pass	
Barium	M20-Jn49909	CP	%	102			75-125	Pass	
Beryllium	M20-Jn49909	CP	%	96			75-125	Pass	
Boron	M20-Jn49909	CP	%	86			75-125	Pass	
Cadmium	M20-Jn49909	CP	%	97			75-125	Pass	
Chromium	M20-Jn49909	CP	%	96			75-125	Pass	
Cobalt	M20-Jn49909	CP	%	99			75-125	Pass	
Copper	M20-Jn49909	CP	%	125			75-125	Pass	
Lead	M20-Jn49909	CP	%	99			75-125	Pass	
Manganese	M20-Jn49909	CP	%	100			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	M20-Jn49909	CP	%	87			70-130	Pass	
Molybdenum	M20-Jn49909	CP	%	99			75-125	Pass	
Nickel	M20-Jn49909	CP	%	98			75-125	Pass	
Selenium	M20-Jn49909	CP	%	97			75-125	Pass	
Silver	M20-Jn49909	CP	%	81			75-125	Pass	
Tin	M20-Jn49909	CP	%	102			75-125	Pass	
Zinc	M20-Jn49909	CP	%	100			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Barium	M20-Jn49909	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Beryllium	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron	M20-Jn49909	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Cadmium	M20-Jn49909	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese	M20-Jn49909	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Mercury	M20-Jn49909	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Molybdenum	M20-Jn49909	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Nickel	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Selenium	M20-Jn49909	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Silver	M20-Jn49909	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Tin	M20-Jn49909	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Zinc	M20-Jn49909	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Savini Suduweli	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Chain of Custody Record

(modified after US EPA chain of custody form)

Sheet 1 of 1

Atma *Environmental*

PROJECT: Clarkefield

Sampler's Signature: **HB**

Sampler's Name: Henry Baxter

Site No: 1894

DATE: 26/6/20

Time: 5:00pm

	SAMPLE NO.	DISCRETE	COMPOSITE	GRAB	SAMPLE MATRIX: SOIL	WATER	BLANK / ____	ANALYSIS FOR: 17 Metals (see below)	OCPs	S4 + PAHs							Hold	NO. of CONTAINERS	HIGH CONTAM EXPECTED	COMPOSITING INSTRUCTIONS:
1	SPLIT-240620A	X			X			X	X	X								1		
2	SPLIT-240620B	X			X												X	1		
3	SPLIT-250620	X			X			X	X	X								1		
4	SPLIT-260620A	X			X			X										1		
5	SPLIT-260620B	X			X												X	1		
6	SPLIT-260620C	X			X												X	1		
	TOTAL:	6				6		3	2	2							3	6		

Environmental Division
Melbourne
Work Order Reference
EM2011157

Telephone : +61-3-8549 9600

DISPATCHED BY: (sign) (DATE/TIME) 29-Jun-20 12:00pm

△ **HB**

■ RECEIVED BY: (sign) Sam @ALS (DATE/TIME) 29/6/20 15:15

COURIERED BY: (sign) 603 (DATE/TIME)

LAB NAME: **ALS**

INITIAL RESULTS REQUESTED WITHIN: **NORMAL**

REMARKS: **Please email completed COC, Sample Receipt Notification, results and invoices to:**

Please email results to: gberry@atmaenvironmental.com
rmcphillips@atmaenvironmental.com hbaxter@atmaenvironmental.com

*17 Metals: As, Ba, Be, B, Cd, Cr, Co, Cu, Mn, Mo, Ni, Pb, Hg, Se, Ag, Sn, Zn

NOTE: △ Must be completed by Atma Environmental ■ Must be completed with date and time by laboratory.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM2011157**	Page	: 1 of 7
Client	: **ATMA ENVIRONMENTAL P/L**	Laboratory	: Environmental Division Melbourne
Contact	: HENRY BAXTER	Contact	: Customer Services EM
Address	: 56 William Street ABBOTSFORD VIC, AUSTRALIA 3067	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: Clarkefield	Date Samples Received	: 29-Jun-2020 15:15
Order number	: ----	Date Analysis Commenced	: 02-Jul-2020
C-O-C number	: ----	Issue Date	: 06-Jul-2020 15:42
Sampler	: ----		
Site	: 1894		
Quote number	: EN/333 Seconday work only		
No. of samples received	: 6		
No. of samples analysed	: 3		

ilac-MRA NATA
Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT-240620A	SPLIT-250620	SPLIT-260620A	----	----
			Client sampling date / time	24-Jun-2020 00:00	25-Jun-2020 00:00	26-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2011157-001	EM2011157-003	EM2011157-004	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	28.3	----	----
Moisture Content	----	1.0	%	25.5	26.7	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	----	----
Barium	7440-39-3	10	mg/kg	40	60	370	----	----
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	20	21	35	----	----
Cobalt	7440-48-4	2	mg/kg	5	5	10	----	----
Copper	7440-50-8	5	mg/kg	6	8	11	----	----
Lead	7439-92-1	5	mg/kg	8	30	18	----	----
Manganese	7439-96-5	5	mg/kg	67	109	113	----	----
Molybdenum	7439-98-7	2	mg/kg	<2	<2	<2	----	----
Nickel	7440-02-0	2	mg/kg	10	8	20	----	----
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	----	----
Silver	7440-22-4	2	mg/kg	<2	<2	<2	----	----
Tin	7440-31-5	5	mg/kg	<5	<5	<5	----	----
Zinc	7440-66-6	5	mg/kg	42	46	23	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT-240620A	SPLIT-250620	SPLIT-260620A	----	----
			Client sampling date / time	24-Jun-2020 00:00	25-Jun-2020 00:00	26-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2011157-001	EM2011157-003	EM2011157-004	--------	--------
				Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	----
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT-240620A	SPLIT-250620	SPLIT-260620A	----	----
			Client sampling date / time	24-Jun-2020 00:00	25-Jun-2020 00:00	26-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2011157-001	EM2011157-003	EM2011157-004	--------	--------
				Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	----	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**94.7**	**96.9**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**91.1**	**100**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**89.5**	**94.8**	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**88.8**	**93.4**	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**68.3**	**72.7**	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**89.9**	**105**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SPLIT-240620A	SPLIT-250620	SPLIT-260620A	----	----
			Client sampling date / time	24-Jun-2020 00:00	25-Jun-2020 00:00	26-Jun-2020 00:00	----	----
Compound	CAS Number	LOR	Unit	EM2011157-001	EM2011157-003	EM2011157-004	--------	--------
				Result	Result	Result	----	----
EP075(SIM)T: PAH Surrogates - Continued								
Anthracene-d10	1719-06-8	0.5	%	111	115	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	112	116	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	69.7	69.8	----	----	----
Toluene-D8	2037-26-5	0.2	%	70.1	69.3	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	87.3	87.2	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	38	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	33	139
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EM2011157**	Page	: 1 of 9
Client	: **ATMA ENVIRONMENTAL P/L**	Laboratory	: Environmental Division Melbourne
Contact	: HENRY BAXTER	Contact	: Customer Services EM
Address	: 56 William Street ABBOTSFORD VIC, AUSTRALIA 3067	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: ----	Telephone	: +61-3-8549 9600
Project	: Clarkefield	Date Samples Received	: 29-Jun-2020
Order number	: ----	Date Analysis Commenced	: 02-Jul-2020
C-O-C number	: ----	Issue Date	: 06-Jul-2020
Sampler	: ----		
Site	: 1894		
Quote number	: EN/333 Seconday work only		
No. of samples received	: 6		
No. of samples analysed	: 3		

ilac-MRA NATA
Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nancy Wang	2IC Organic Chemist	Melbourne Organics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3115416)									
EM2011128-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	80	90	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	18	19	6.05	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	5	5	0.00	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	10	0.00	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	13	13	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	47	54	12.2	0% - 50%
		EG005T: Manganese	7439-96-5	5	mg/kg	196	188	4.64	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	37	39	6.14	No Limit
EM2011198-010	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	40	30	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	11	51.2	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3115416) - continued									
EM2011198-010	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	6	7	0.00	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Tin	7440-31-5	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3115539)									
EM2011083-027	Anonymous	EA055: Moisture Content	----	0.1	%	9.0	7.9	12.6	No Limit
EM2011126-011	Anonymous	EA055: Moisture Content	----	0.1	%	14.5	13.8	4.64	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3115542)									
EM2011128-003	Anonymous	EA055: Moisture Content	----	0.1	%	21.4	21.3	0.00	0% - 20%
EM2011270-004	Anonymous	EA055: Moisture Content	----	0.1	%	11.3	9.6	16.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3115417)									
EM2011128-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EM2011198-010	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3117188)									
EM2011420-003	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3117187)									
EM2011420-003	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3117187) - continued									
EM2011420-003	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3114989)									
EM2011125-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EM2011157-001	SPLIT-240620A	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3117186)									
EM2011420-003	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3114989)									
EM2011125-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2011157-001	SPLIT-240620A	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3117186)									
EM2011420-003	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 3114989)									
EM2011125-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
				Laboratory Duplicate (DUP) Report					
EP080: BTEXN (QC Lot: 3114989) - continued									
EM2011157-001	SPLIT-240620A	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3115416)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	99.0	78.5	107
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	99.2	76.4	110
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	107	85.4	114
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	94.8	76.2	108
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	97.4	77.7	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	95.3	78.1	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	95.6	78.1	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	95.4	78.4	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	102	80.6	110
EG005T: Molybdenum	7439-98-7	2	mg/kg	<2	7.9 mg/kg	92.6	78.0	114
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	100	79.9	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	105	92.0	110
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.1 mg/kg	82.0	80.0	108
EG005T: Tin	7440-31-5	5	mg/kg	<5	5.2 mg/kg	85.9	78.4	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	93.5	79.1	110
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3115417)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	102	76.9	110
EP068A: Organochlorine Pesticides (OC) (QCLot: 3117188)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	71.8	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	72.2	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	74.2	124
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	69.1	124
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	65.1	125
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	66.6	122
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	98.7	71.8	123
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	71.1	124
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.5	64.8	128
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	70.2	126
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	72.1	124
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.1	68.0	122
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	73.0	124
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	114	55.8	130
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.4	72.0	124
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	72.0	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 3117188) - continued								
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	87.7	66.3	131
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	62.4	131
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.7	55.4	130
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	68.8	128
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	95.2	55.5	132
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3117187)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	106	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	102	76.9	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	109	85.3	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	106	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	112	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	117	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	112	83.4	136
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	117	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	108	80.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	118	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	88.4	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	97.4	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	90.0	67.4	120
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	93.6	66.0	126
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	94.3	65.4	127
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	94.5	67.8	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3114989)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	123	61.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3117186)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	900 mg/kg	106	71.8	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	3030 mg/kg	105	83.9	125
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	1520 mg/kg	103	77.9	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3114989)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	117	59.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3117186)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	1160 mg/kg	104	72.2	128
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	4020 mg/kg	105	82.1	122
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	280 mg/kg	111	55.1	131
EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080: BTEXN (QCLot: 3114989)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080: BTEXN (QCLot: 3114989) - continued								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	101	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	116	66.6	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	109	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	122	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	119	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	92.1	61.2	123

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3115416)							
EM2011128-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	102	78.0	124
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.7	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	94.5	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	105	80.0	120
		EG005T: Lead	7439-92-1	250 mg/kg	98.0	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	93.5	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	87.1	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3115417)							
EM2011128-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	108	76.0	116
EP068A: Organochlorine Pesticides (OC) (QCLot: 3117188)							
EM2011128-003	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	94.4	22.0	139
		EP068: Heptachlor	76-44-8	0.5 mg/kg	90.7	18.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	96.3	23.0	136
		EP068: Dieldrin	60-57-1	0.5 mg/kg	96.7	42.0	136
		EP068: Endrin	72-20-8	0.5 mg/kg	124	23.0	146
		EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	87.5	20.0	133
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3117187)							
EM2011128-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	103	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	115	52.0	148
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3114989)							
EM2011125-005	Anonymous	EP080: C6 - C9 Fraction	----	28 mg/kg	77.5	42.0	131

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3117186)							
EM2011000-009	Anonymous	EP071: C10 - C14 Fraction	----	900 mg/kg	104	53.0	123
		EP071: C15 - C28 Fraction	----	3030 mg/kg	105	70.0	124
		EP071: C29 - C36 Fraction	----	1520 mg/kg	103	64.0	118
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3114989)							
EM2011125-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	78.9	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3117186)							
EM2011000-009	Anonymous	EP071: >C10 - C16 Fraction	----	1160 mg/kg	103	65.0	123
		EP071: >C16 - C34 Fraction	----	4020 mg/kg	105	67.0	121
		EP071: >C34 - C40 Fraction	----	280 mg/kg	109	44.0	126
EP080: BTEXN (QCLot: 3114989)							
EM2011125-005	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	92.3	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	98.4	56.0	139

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EM2011157**	Page	: 1 of 5
Client	: **ATMA ENVIRONMENTAL P/L**	Laboratory	: Environmental Division Melbourne
Contact	: HENRY BAXTER	Telephone	: +61-3-8549 9600
Project	: Clarkefield	Date Samples Received	: 29-Jun-2020
Site	: 1894	Issue Date	: 06-Jul-2020
Sampler	: ----	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) SPLIT-240620A	**24-Jun-2020**	**----**	----	----	**02-Jul-2020**	08-Jul-2020	✓
Soil Glass Jar - Unpreserved (EA055) SPLIT-250620	**25-Jun-2020**	**----**	----	----	**02-Jul-2020**	09-Jul-2020	✓
Soil Glass Jar - Unpreserved (EA055) SPLIT-260620A	**26-Jun-2020**	**----**	----	----	**02-Jul-2020**	10-Jul-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	21-Dec-2020	✓	**03-Jul-2020**	21-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	22-Dec-2020	✓	**03-Jul-2020**	22-Dec-2020	✓
Soil Glass Jar - Unpreserved (EG005T) SPLIT-260620A	**26-Jun-2020**	**03-Jul-2020**	23-Dec-2020	✓	**03-Jul-2020**	23-Dec-2020	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	22-Jul-2020	✓	**03-Jul-2020**	22-Jul-2020	✓
Soil Glass Jar - Unpreserved (EG035T) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	23-Jul-2020	✓	**03-Jul-2020**	23-Jul-2020	✓
Soil Glass Jar - Unpreserved (EG035T) SPLIT-260620A	**26-Jun-2020**	**03-Jul-2020**	24-Jul-2020	✓	**03-Jul-2020**	24-Jul-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	08-Jul-2020	✓	**03-Jul-2020**	12-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP068) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	09-Jul-2020	✓	**03-Jul-2020**	12-Aug-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	08-Jul-2020	✓	**03-Jul-2020**	12-Aug-2020	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	09-Jul-2020	✓	**03-Jul-2020**	12-Aug-2020	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	08-Jul-2020	✓	**03-Jul-2020**	08-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	09-Jul-2020	✓	**03-Jul-2020**	09-Jul-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	08-Jul-2020	✓	**03-Jul-2020**	08-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	09-Jul-2020	✓	**03-Jul-2020**	09-Jul-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) SPLIT-240620A	**24-Jun-2020**	**03-Jul-2020**	08-Jul-2020	✓	**03-Jul-2020**	08-Jul-2020	✓
Soil Glass Jar - Unpreserved (EP080) SPLIT-250620	**25-Jun-2020**	**03-Jul-2020**	09-Jul-2020	✓	**03-Jul-2020**	09-Jul-2020	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270E Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270E. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260D. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2011157**

Client	: **ATMA ENVIRONMENTAL P/L**	Laboratory	: Environmental Division Melbourne
Contact	: HENRY BAXTER	Contact	: Customer Services EM
Address	: 56 William Street ABBOTSFORD VIC, AUSTRALIA 3067	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: hbaxter@atmaenvironmental.com	E-mail	: ALSEnviro.Melbourne@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9600
Facsimile	: ----	Facsimile	: +61-3-8549 9626
Project	: Clarkefield	Page	: 1 of 3
Order number	: ----	Quote number	: EM2015ATMENV0001 (EN/333 Seconday work only)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: 1894		
Sampler	:		

Dates

Date Samples Received	: 29-Jun-2020 15:15	Issue Date	: 30-Jun-2020
Client Requested Due Date	: 06-Jul-2020	Scheduled Reporting Date	: **06-Jul-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 5.2°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 6 / 3

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Sample(s) received in non-ALS container(s).**
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EG005T (solids) Total Metals by ICP-AES	SOIL - EG035T (solids) Total Mercury by FIMS	SOIL - EP068A (solids) Organochlorine Pesticides by GCMS	SOIL - S-07 TRH/BTEXN/PAH (SIM)
EM2011157-001	24-Jun-2020 00:00	SPLIT-240620A		✓	✓	✓	✓	✓
EM2011157-002	24-Jun-2020 00:00	SPLIT-240620B	✓					
EM2011157-003	25-Jun-2020 00:00	SPLIT-250620		✓	✓	✓	✓	✓
EM2011157-004	26-Jun-2020 00:00	SPLIT-260620A		✓	✓	✓		
EM2011157-005	26-Jun-2020 00:00	SPLIT-260620B	✓					
EM2011157-006	26-Jun-2020 00:00	SPLIT-260620C	✓					

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

GLEN BERRY

- *AU Certificate of Analysis - NATA (COA)	Email	gberry@atmaenvironmental.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	gberry@atmaenvironmental.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	gberry@atmaenvironmental.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	gberry@atmaenvironmental.com
- A4 - AU Tax Invoice (INV)	Email	gberry@atmaenvironmental.com
- Chain of Custody (CoC) (COC)	Email	gberry@atmaenvironmental.com
- EDI Format - ENMRG (ENMRG)	Email	gberry@atmaenvironmental.com
- EDI Format - ESDAT (ESDAT)	Email	gberry@atmaenvironmental.com

HENRY BAXTER

- *AU Certificate of Analysis - NATA (COA)	Email	hbaxter@atmaenvironmental.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	hbaxter@atmaenvironmental.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	hbaxter@atmaenvironmental.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	hbaxter@atmaenvironmental.com
- A4 - AU Tax Invoice (INV)	Email	hbaxter@atmaenvironmental.com
- Chain of Custody (CoC) (COC)	Email	hbaxter@atmaenvironmental.com
- EDI Format - ENMRG (ENMRG)	Email	hbaxter@atmaenvironmental.com
- EDI Format - ESDAT (ESDAT)	Email	hbaxter@atmaenvironmental.com

INVOICES

- *AU Certificate of Analysis - NATA (COA)	Email	rmcphillips@atmaenvironmental.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	rmcphillips@atmaenvironmental.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	rmcphillips@atmaenvironmental.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	rmcphillips@atmaenvironmental.com
- A4 - AU Tax Invoice (INV)	Email	rmcphillips@atmaenvironmental.com
- Chain of Custody (CoC) (COC)	Email	rmcphillips@atmaenvironmental.com
- EDI Format - ENMRG (ENMRG)	Email	rmcphillips@atmaenvironmental.com
- EDI Format - ESDAT (ESDAT)	Email	rmcphillips@atmaenvironmental.com

APPENDIX E

Asbestos Clearance Works

Atma Environmental
ATF Atma Unit Trust ABN 25 256 491 913

25 August 2020
Our Ref: **#1894B Clarkefield**

Clarkefield Developments Pty Ltd c/-
Travis Hingston, Senior Development Manager
APD Projects
Level 3, 468 St Kilda Road,
Melbourne VIC 3004 via e-mail: travis.hingston@apdprojects.com.au

Mr. Hingston;

Re: Asbestos Decontamination, Air Monitoring and Clearance Certificate – 'Dam Area', Clarkefield, Vic.

Atma Environmental Pty Ltd (Atma) previously concluded a Preliminary Site Investigation (PSI)[1] of the subject property intended for urban development. The PSI noted the presence of bonded asbestos material on the ground surface in an area located east of a dam located in the south part of the Site.

Although a further detailed site investigation (Atma, in preparation) did not observe visible asbestos in an area where it had previously been reported, potential human health risks arising from the earlier PSI observations were resolved by the subsequent completion of an asbestos removal and clearance program over the affected area.

The following works were completed:

- Engagement and hygienist supervision of licensed asbestos removalist
- Para-occupational asbestos fibre air monitoring during removal works
- Asbestos inspection and clearance certification of works area

Asbestos Removal

Further to the requisite five-day notification period as required by Victoria Workcover Authority, site remediation works were independently performed by Phase One Asbestos Pty Ltd on 19 and 20 August 2020.

Atma Environmental was present at the commencement of and during the removal works to direct Phase One onto the area where contamination had previously been noted.

The remediation work involved additional inspections of the general area, use of a 5 t excavator and manual vegetation removal over the eastern side of the dam where asbestos had been spotted during the PSI work, vegetation/soil raking and picking of any found asbestos with the asbestos-abated material retained on site.

[1] Atma Environmental *"Preliminary Site Investigation – Area 12A & 13, Clarkefield, Vic."* [Ref. 1788] 7 August 2019

Asbestos Fibre Air Monitoring

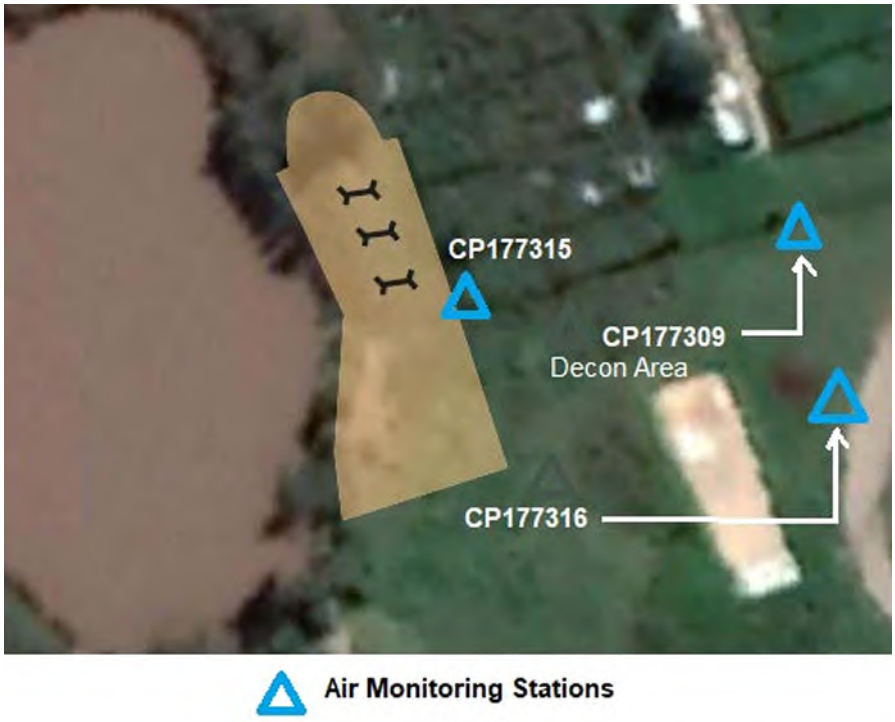
Attached to this letter is a summary of results from the airborne asbestos fibre monitoring completed on 19 August 2020.

Method

Monitoring was completed in accordance with Safe Work Australia's *'Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres'*, 2nd Edition [NOHSC:3003 (2005)] and our in-house standard operating procedure.

Airborne asbestos fibre monitoring was undertaken using two PCXR sampling pumps which were setup at predetermined locations onsite. Sampling pumps were calibrated at the start of the day by a field rotameter. Individual 25mm PCM air sampling cassettes (0.8µm) were used with the sample pumps.

Three air sampler pumps were placed at edges the imposed asbestos exclusion zone and within the decontamination zone as shown below.



All samples were couriered to Eurofins Environment Testing (a NATA accredited laboratory) for fibre count analysis (see attached laboratory report).

Results

The attached table provides a summary of the fibre count results for each sample and the calculated fibre concentration (fibres/mL).

All samples were found to have satisfactory fibre concentrations (zero or 0.001 fibres per millilitre of air sampled). For fibre concentrations of ***less than*** 0.01 fibres per millilitre of air, no action is required.

Clearance Certification

Henry Baxter of Atma Environmental (being a competent person in relation to asbestos matters) inspected the ground surface in the area marked on Figure 1 and found it to be visually free of asbestos-containing material.

Based on the completed inspection, we confirm that visible asbestos containing materials (ACM) have been satisfactorily removed from the surface of the soil at the location marked on Figure 1.

This clearance only covers the areas listed above and indicated in Figure 1. Asbestos materials may be present in other areas of the site. It must be noted, that only the surface of the soil was inspected for the presence of ACM; no judgement is made as to the possible presence of ACM in the sub-soil or within structures present at the site. It is noted that due to the nature of asbestos in soils and the degree of vegetation cover onsite, there remains a potential that asbestos debris may be exposed in the future following exposure to weather and further earthworks. If minor quantities of asbestos containing materials become visible at a later stage, any person who has management and control of this site must inspect it and arrange for its removal. If a significant quantity of non-friable or any friable asbestos containing materials are identified, the site supervisor shall direct works to cease and engage an approved asbestos removalist or engage a qualified hygienist undertake an independent investigation.

Post-activity site photos of the cleared area are appended.

Owing to the nature of asbestos contamination in soil it is recommended that Clarkefield Developments Pty Ltd adopt a procedure to manage any incidental asbestos finds that may arise in the future during site development. If you have any queries regarding this information, please contact me on 03 9429 6955.

Best regards,
ATMA ENVIRONMENTAL PTY LTD

Henry Baxter
Environmental Scientist

Attachments

- Figure 1 – Asbestos Clearance Area
- Asbestos Para-occupational Air Monitoring Results
- Asbestos Air Monitoring Sampling Log and Chain of Custody Report
- Eurofins Environment Testing - Asbestos Fibre Monitoring Report No. 738889
- Post-Activity Site Photos

Limitations and Exceptions of Report

The report pertains to the scope of work outlined previously. This report describes the work as undertaken and has been compiled for the use of Clarkefield Developments Pty Ltd only. Its conclusions are only valid for the purpose for which it was requested. This report is not an 'environmental audit' within the meaning of the *Environment Protection Act 2017* (Vic).

It is valid only when it is in original and complete form, and any person or company other than Clarkefield Developments Pty Ltd who rely on the report without specific reference to and permission from Atma Environmental Pty Ltd does so at their own risk. While every care has been taken in the compilation of this report, to the extent that its conclusions are based on the analysis of the data made available by your organisation or by a third party, no responsibility or liability is accepted for consequences arising from either errors or omissions in that data, or from factors or data which were not made available to Atma Environmental Pty Ltd or which Atma Environmental Pty Ltd could not ascertain by reasonable inquiry in the ordinary course of its investigation, nor for any commercial decisions taken as a result of the report.

This report has not included clearance of asbestos for other areas of the site, nor has it considered the off-site disposal classification of soils, as may be relevant where off-site disposal is required. The report has not specifically considered above ground issues such as lead-based paint and installed asbestos containing building products such as may exist in structures.

Environmental site assessments document property conditions at the time they are conducted. These conditions may change over time. In addition, contamination (potentially of greater or lesser severity than as reported) may exist at other locations, which have not been tested. The results of additional site testing and future changes in assessment guidelines, criteria or legislative requirements may alter the conclusions of this report and any recommendations flowing therefrom.

Atma Environmental

Client:
CLARKEFIELD DEVELOPMENTS PTY LTD

Project: #1894B Clarkefield - Asbestos Clearance

Drawn by: GRB Dated: 24/08/2020 Status: Final

Figure 1. Asbestos Clearance Area

Area for Asbestos Clearance

Test Pit

Approximate Scale:

0 5 10 20 30 m

Asbestos Paraoccupational Air Monitoring Results

PROJECT: 1894B CLARKEFIELD

Atma Environmental

Sampling Date	Sample ID	Lab Report No.	Sample Description	Sample Duration (min)	Number of Fibres	Calculated Fibre Concentration (fibres/mL)	Reported Fibre Concentration (fibres/mL)
19-Aug	CP177310	738889	BLANK	BLANK	0.0	0.000	<0.01
	CP177309	738889	Decontamination area	390	0.0	0.000	<0.01
	CP177315	738889	Back left corner of former animal yard	390	1.0	0.001	<0.01
	CP177316	738889	South-east corner of remediation area	385	0.0	0.000	<0.01

$$C = \frac{A \cdot N}{a \cdot n \cdot r \cdot t}$$

C = Fibre Concentration (fibres/mL)

A = Effective Filter Area (385 mm^2)

N = Number of Fibres

a = Graticule Area (0.00785 mm^2)

n = Number of Graticules (100)

r = Flow Rate (1,200 mL/min)

t = Sample Duration (min)

Highlighted results exceed acceptance criteria:

- > 2 countable fibres in Blank samples
- Fibre concentration ≥0.01 fibres/mL
- Blank to sample count ratio >10%

Asbestos Air Monitoring Sampling Log and Chain of Custody Record

Atma *Environmental*

Project Name: CLARKEFIELD

Project: No.: 1894B

Date: 19/8/20

Sampler's Name: H. BAXTER

Sampler's Signature:

Eurofins Filter Cassette Box Number: MFC - 0089

Page 1 of 1

Dispatched By (sign): (DATE/TIME) 19/8/20

Couriered By (sign): (DATE/TIME)

Received By (sign): (DATE/TIME)

LAB: Eurofins

INITIAL RESULTS REQUESTED WITHIN: 24 HRS

Please email COC upon reciept of samples as confirmation for our records.

Please email results to:

rmcphillips@atmaenvironmental.com

hbaxter@atmaenvironmental.com

Weather Observations:

Air Sampling Cassetes

Pump ID	Sample ID	Time On	Time Off	Total Time (min)	Flow Rate Start (ml/min)	Flow Rate Finish (ml/min)	Location Description	Analysis: Asbestos 0.1 fibres /100 Fields
ASP01	CP177309	0835	1505	390	1200	1200	DELON AREA	
ASP02	CP177315	0835	1505	390	1200	1200	BACK LEFT CORNER OF FORMER ~~SOUTH WEST~~ ANIMAL YARD	
BLANK	CP177310 BLANK	/	/	/	/	/	~~SOUTH EAST CORNER OF REM ZONE~~	
ASP03	CP177316	0840	1505	385	1200	1200	SOUTH EAST CORNER OF REM ZONE	

Required flowrates/times to collect 400L sample

Flowrate (ml/min)	Time to collect 400L
1200	5 hours, 56 mins
1500	4 hours, 45 mins
2000	3 hours, 34 mins
3000	2 hours, 14 mins

Additional Notes:

PLEASE TEST THESE SAMPLES

Zoe E.F
D.O 20/8 8:30am.

738889

eurofins | Environment Testing

ABN: 50 005 085 521 www.eurofins.com.au EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	Atma Environmental
Contact name:	Rory McPhillips
Project name:	CLARKEFIELD
Project ID:	1894B
Turnaround time:	Same day
Date/Time received	Aug 20, 2020 8:30 AM
Eurofins reference	738889

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✓ All samples have been received as described on the above COC.
- ✓ COC has been completed correctly.
- ✗ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✗ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✗ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Savini Suduweli on phone : or by email: SaviniSuduweli@eurofins.com

Results will be delivered electronically via email to Rory McPhillips - rmcphillips@atmaenvironmental.com.

Global Leader - Results you can trust

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Atma Environmental
56 William St
Abbotsford
VIC 3067

Attention:	Rory McPhillips
Report	738889-AFA
Project Name	CLARKEFIELD
Project ID	1894B
Received Date	Aug 20, 2020
Date Reported	Aug 20, 2020

METHODOLOGY:

Asbestos Counting	Conducted in accordance with the National Occupational Health & Safety Commission - Guidance Note on The Membrane Filter Method For Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC:3003(2005)] and in-house Method LTM-ASB-8010.

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name CLARKEFIELD
Project ID 1894B
Date Sampled Aug 19, 2020
Report 738889-AFA

Eurofins Sample No.	Client Sample ID	Location	Fibres/100 fields
20-Au29837	ASP01 - CP177309	Decon Area	0/100
20-Au29838	ASP02 - CP177315	Back Left Corner of Former Animal Yard	1/100
20-Au29839	ASP03 - CP177316	South East Corner of REM Zone	0/100
20-Au29840	BLANK - CP177310	Field Blank	0/100

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8010	Melbourne	Aug 20, 2020	Indefinite

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name:	Atma Environmental	**Order No.:**		**Received:**	Aug 20, 2020 8:30 AM
Address:	56 William St Abbotsford VIC 3067	**Report #:**	738889	**Due:**	Aug 20, 2020
		Phone:	9429 6955	**Priority:**	Same day
		Fax:	9429 5911	**Contact Name:**	Rory McPhillips
Project Name:	CLARKEFIELD				
Project ID:	1894B				

Eurofins Analytical Services Manager : Savini Suduweli

Sample Detail						Asbestos (amount of fibres in air)
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Newcastle Laboratory						
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	ASP01 - CP177309	Aug 1, 2020		Filter paper	M20-Au29837	X
2	ASP02 - CP177315	Aug 19, 2020		Filter paper	M20-Au29838	X
3	ASP03 - CP177316	Aug 19, 2020		Filter paper	M20-Au29839	X
4	BLANK - CP177310	Aug 19, 2020		Filter paper	M20-Au29840	X
Test Counts						4

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	N/A
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Sophie Bush	Senior Analyst-Asbestos (VIC)

Authorised by:

Katyana Gausel	Senior Analyst-Asbestos (NSW) (Key Technical Personnel)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

1. Looking SW from decon area

2. Detail view of northern area extent

3. Looking south towards decon area

4. Looking south along length of cleared area